MAN PRODUCTION TAMPER PASSES SANTA FE TESTS p. 22

JANUARY 3/10, 1966

RAILWAY AGE

WEEKLY

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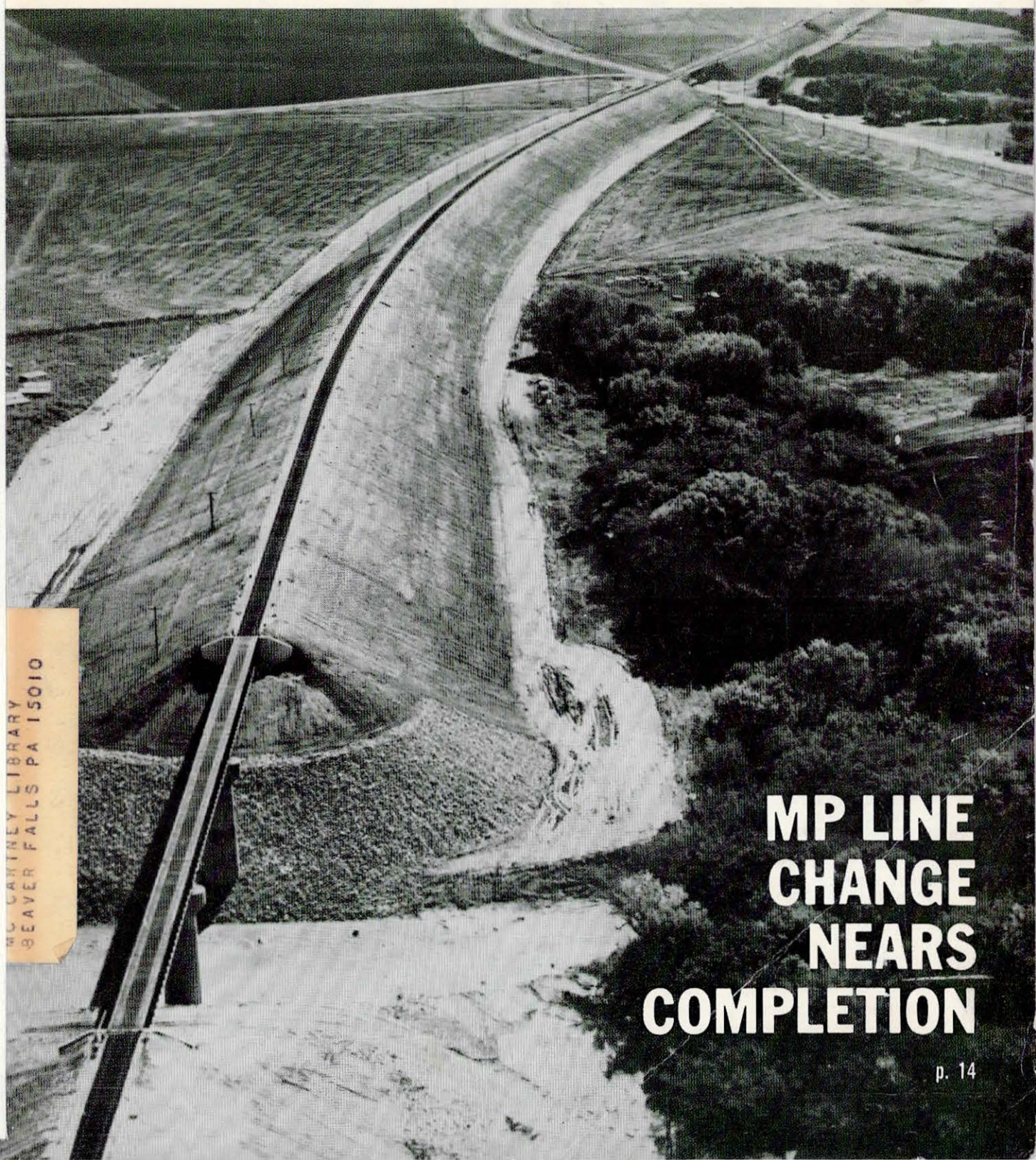

MP LINE CHANGE NEARS COMPLETION

p. 14

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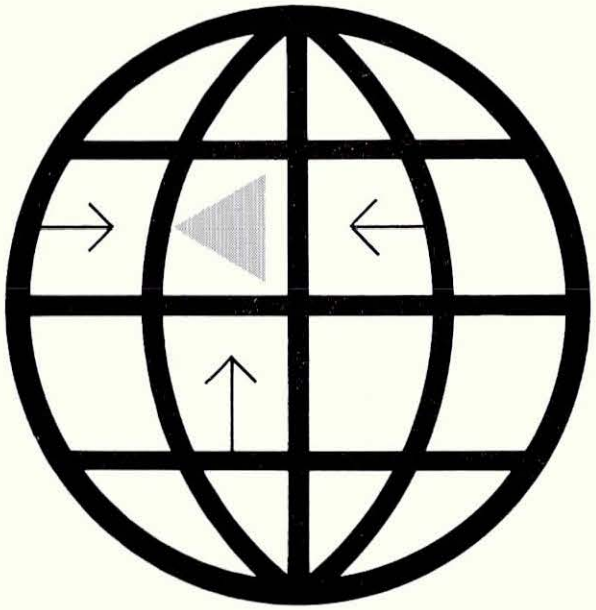
Join the First Mobilized Attack on Problems of Urban Transit



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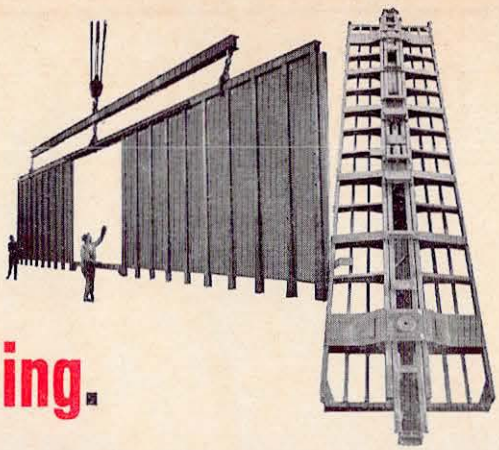
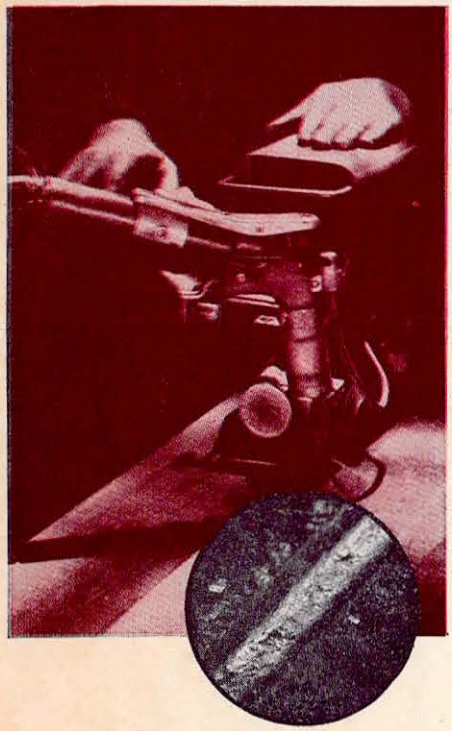


First of all . . . the welding.



Submerged arc welding with a semi-automatic unit gives 70% penetration specified by the buyer. A uniform weld with no undercut can be laid at the rate of 12" per minute with no joint preparation. This job would be nearly impossible to do by hand without a lot of costly, time consuming preparation. Machines also do x-ray quality work.

Forged reinforcements are being welded to a center-plate using flux-cored electrode with continuous wire feed. With this equipment, Berwick's welders can apply a ½" fillet weld in a single pass and make a more rigid center plate at the same time. Close-up shows practically no splatter. This welding method increased production 60% and savings are being passed on to the buyer.

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Berwick's old-style craftsmen have been building railroad equipment longer than anyone else in the country . . . since 1894. Armed with new techniques and equipment, they can deliver the kind of car components you need in less time than you think possible. How 'bout letting us bid on your next order?

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RAILWAY AGE January 3/10, 1966 • Vol. 160, No. 1

THIS WEEK

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The Kansas project, which is scheduled to go into service next month, features a variety of cost-cutting techniques.

18 Why E-L uses small crossing gangs
More work is done with fewer men at less cost since the Erie Lackawanna revamped its procedures for grade-crossing work.

22 Are two heads better than one?
Tests of a one-man, dual-headed production tamper indicate the answer is 'yes.' The machine will be marketed this year.

24 Room at the top—for the operating man
One of the best avenues to a railroad presidency these days seems to be through the engineering-operating end of the business.

30 Examiners propose car-rental changes
They would replace per diem with a time-mileage basis, and allowances on shipper-owned tank cars with rate adjustments.

40 The Action Page—The railroad world gets smaller
Railroading is not a parochial profession. Its practitioners can learn much from their counterparts around the globe.

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SHORT AND SIGNIFICANT

Decision time near for Penn-Central

Year-end reports that the Interstate Commerce Commission had approved the Pennsylvania-New York Central merger turned out to be premature—but indications were strong that a decision would come soon (perhaps early in February) and most observers thought it would be favorable. As of last week, the Commission was saying only that the merger was still under "active consideration." Also on the way: A decision on the Great Northern Pacific & Burlington consolidation, though opinion varies widely as to whether the ICC will say "yes" or "no."

●

Stockholders asked to back C&O-N&W merger

Chesapeake & Ohio and Norfolk & Western set out last week to build shareholder support for their proposed merger—with a 59-page merger-information statement mailed to all 170,000 stockholders of the two companies. At the same time, C&O and N&W opened a joint office in New York's financial district to serve as an information center and to aid in proxy solicitation. Stockholders will be asked to vote on the proposal at annual meetings scheduled for May 12—C&O in Cleveland and N&W in Roanoke, Va.

●

RI: Budget goes up as deficit comes down

The re-equipping of the Rock Island continues. For 1966, the road's power and rolling-stock program now adds up to $24.3 million, with new authorizations for 25 locomotive units and 50 additional freight cars. Over the 1965-66 period, RI's equipment package will total at least $82 million—with more than 5,000 new freight cars and 90 diesel-electric units received, on order or authorized. Meanwhile, there were indications that Rock Island came through 1965 in somewhat better shape than had been expected. At year's end, the deficit was estimated at about $3.3 million—considerably less than the loss that had been forecast earlier in the year.

●

New York state prepares to take over the LIRR

The Long Island Rail Road gets a new owner next week. On Jan. 20, the state of New York will officially take control of the LIRR, after paying $65 million to the Pennsylvania for the property. No changes in staff or operations are anticipated, but the state's newly-formed Metropolitan Commuter Transportation Authority will be watchdog, and has already earmarked $200 million for a general upgrading and improvement program. Promised Dr. William Ronan, MCTA executive director: The LIRR will buy 500 new m-u commuter cars. He also said the MCTA will take a look at the New Haven's headaches next.

●

C&NW expands its commuter-car fleet

Another 10 bi-level coaches will be added to Chicago & North Western's commuter-car fleet next autumn, at a cost of more than $1.7 million. The new order, placed with Pullman-Standard, represents the third expansion of the fleet since C&NW's suburban-service modernization program was completed in 1961. It also brings the road's investment in suburban equipment alone to more than $51 million. Says Chairman Ben W. Heineman: "We are able to justify these substantial expenditures for new equipment only because the financial health of our suburban service as a completely self-supporting operation is steadily improving."

MONDAY MORNING REPORT

Another proposal for a billion-dollar ditch

Tremendous controversy is still raging round the billion-dollar proposal for a canal between Lake Erie and the Ohio River. The same sort of controversy is building up now over the proposed Champlain Waterway—and the stakes are almost as high.

Champlain Waterway: An old project revived

In 1937, the U.S. Army Corps of Engineers conducted a feasibility study of the project to link the Hudson River with a deep-water channel through Lake Champlain to the St. Lawrence River. At the time, the Army Engineers estimated the cost at $340 million—and dismissed the idea as not feasible. Since then, the St. Lawrence has, of course, been turned into a seaway, leading the Corps of Engineers to dust off the Champlain scheme for a fresh look. The ante, in the meantime, has gone way up: sums talked of for the project are in the neighborhood of $1 billion.

What happens to the paralleling railroad?

If highly subsidized water transportation is introduced on the Champlain route, it is not hard to forecast the effect on the railroads serving the area —the Delaware & Hudson directly, the New York Central indirectly. The D&H mainline parallels the water route for 220 miles, and on this segment the major part of its traffic is in just the sort of bulk commodities that are susceptible to diversion from rail to barge—ore, coal, pulpwood, newsprint, asbestos.

Lost taxes, wages — and dependable transport

To the D&H, the prospect is alarming. The road's management has already warned that construction of the Champlain water route might force it to abandon operations on this portion of its mainline. If that happens, not only the D&H would be the loser: the system would no longer be paying $800,000 annually in real estate taxes, nor $4 million annually in wages in this area. Perhaps most serious of all, communities along the present line would be forfeiting all-year-round transportation available to everybody.

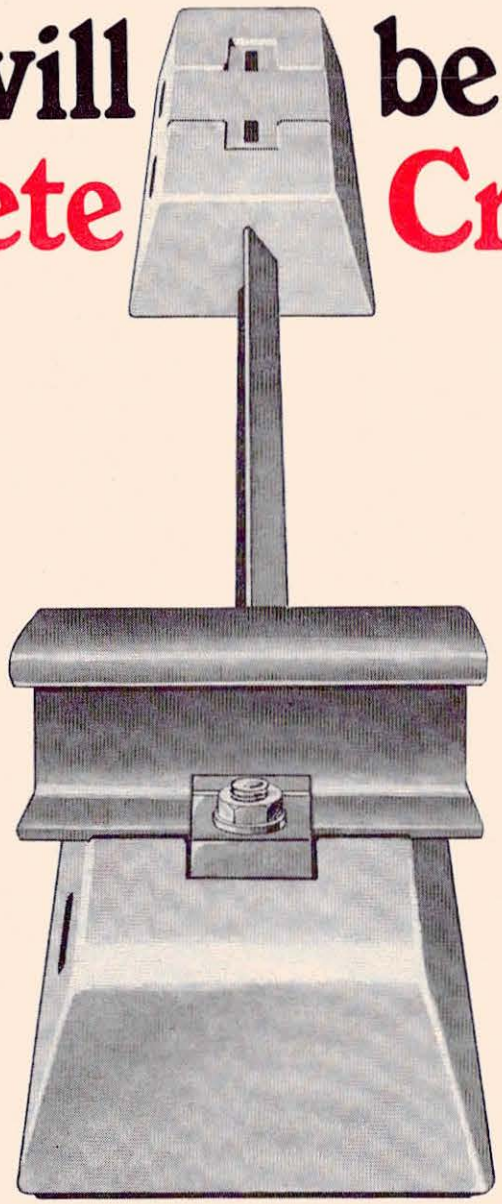
Do waterways really benefit communities?

Advocates of the Champlain scheme have raised prospects of fast-growing new ports in the hinterland. But at the present head of navigation on the Hudson, the Port of Albany failed to live up to expectations as a stimulus to the region's growth, and has been something of a financial strain locally. Other large communities located on the lower-Hudson cannot claim that presence of deep-water nearby has helped their growth. A water route between New York City and the Canadian border would be closed by ice at least four months a year—deep-channel or no deep channel.

A counter-proposal from Hiltz of the D&H

Ultimately, a project to recast the transport pattern of an entire region turns on cost. J. P. Hiltz, president and general manager of the D&H, compared the present billion-dollar scheme with the Ohio-Lake Erie proposal which would cost about the same, and remarked that in the latter case, Army Engineers estimated annual carrying charges at $55 million. If the same figure holds in the Champlain case, he said, "give us the $55 million, and we could haul the freight free."

Chances are, sooner or later you will be using Concrete Crossties



If so, chances are it will be this one, because there is no other crosstie like it in the world . . . (except the 18,000,000 already in use)! It's called the RS Concrete Crosstie for American Railroads

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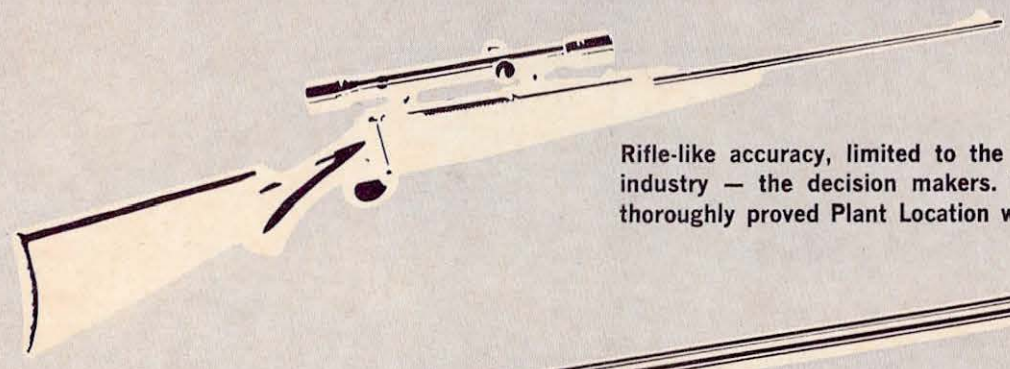

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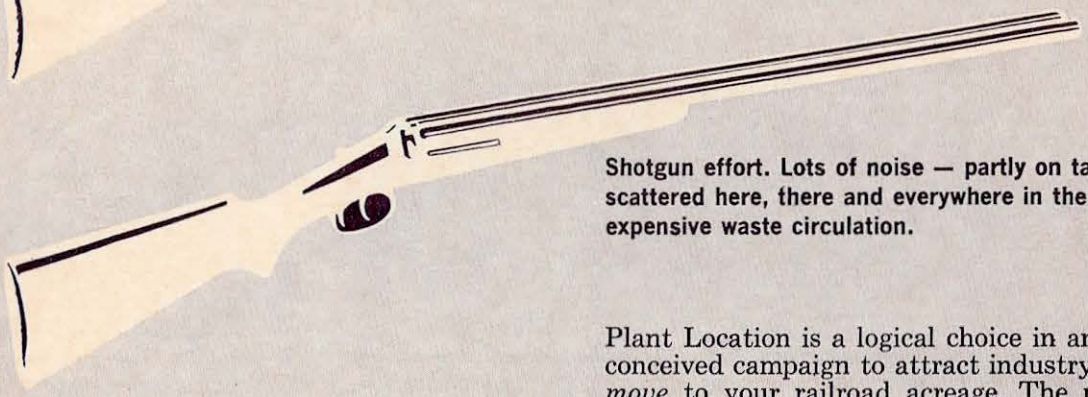

Shotgun effort. Lots of noise — partly on target but scattered here, there and everywhere in the wilds of expensive waste circulation.

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WEEK AT A GLANCE

Coming: 'One helluva transportation system'

Alan S. Boyd, Under Secretary of Commerce for Transportation, had a nice after-dinner speech ready for delivery at the Transportation Research Forum in New York. Only he didn't deliver it. Instead, he lulled tough-minded TRF veterans with off-the-cuff folksiness—then hit them hard with some crackling comments. Commerce, he said, may work toward a policy of instituting user charges on the waterways—but to expect full implementation is "politically unrealistic." LBJ's Transportation Message? "I don't know what the President has in mind, frankly, but we got up a series of proposals and left them on his desk. If he does anything about them, I can tell you right now—we're gonna have one helluva transportation system in this country."

Boyd was fielding the brickbats after he told the TRF men that "transportation men are the most old-fashioned people I ever met in my life." But he hung on bravely for a question period, and after good-humored parrying of a couple of loaded questions, wound up the evening to standing applause. Nobody could stay mad for long at the man who grinned and said, "You may not like what I'm doing, but as long as I am where I am, you're just going to have to live with it."

Trainmen, GNP&B make a settlement

The Brotherhood of Railroad Trainmen and the four roads involved in the proposed Great Northern Pacific & Burlington consolidation have come to terms on a job-protection agreement which would become effective when the companies are merged. Essentially, the pact provides that men represented by the BRT "would be guaranteed their current level of earnings plus future increases for their lifetimes or until their service is terminated through natural attrition." Also included are provisions covering employees moving to new employment points, cash bonuses to senior employees who want to retire and consolidation of seniority rosters. The Trainmen are the second operating organization to reach agreement with the GNP&B roads. The Engineers signed earlier.

Railroad freight volume soars to postwar high

Now it's official: Railroads have just completed their busiest (though not their most profitable) year since World War II. Ton-miles in 1965 totaled 695 billion, falling short of only the 727-billion and 737-billion marks recorded in 1943 and 1944. (Net earnings are estimated at $775 million, best since 1956's $876 million). Last year's carloadings (see table) were up 1.8%, to 29.6 million; bigger cars and longer hauls accounted for the higher percentage increase (5.6%) in ton-miles. Biggest single factor was a 3.4% increase in the important "miscellaneous" category, which includes all manufactured products. The rising popularity of unit trains helped push coal traffic to its best year since 1957. There was a predictably dark spot in the 1965 picture: Loadings of merchandise LCL were down by over 27%. Only two other commodities showed decreases—ore and livestock. Piggyback loadings continued to be the pace-setter in 1965. TOFC loadings totaled 1,031,210 cars, an increase of more than 15% over 1965's 890,216.

FREIGHT TRAFFIC TRENDS

Commodity	1965 Carloadings	1964 Carloadings	% Change
Miscellaneous	16,221,721	15,692,593	+ 3.4
Coal	5,679,188	5,529,744	+ 2.7
Coke	440,212	422,743	+ 4.1
Ore	1,961,668	2,004,968	− 2.2
Forest Products	2,003,409	1,959,550	+ 2.2
Grain and Grain Products	2,657,334	2,625,259	+ 1.2
Livestock	125,217	153,171	−18.3
Merchandise LCL	465,022	639,158	−27.2
TOTAL	**29,553,771**	**29,027,186**	+ 1.8

Fireman-off study sparks new controversy

The National Joint Board in the fireman-off case ended its study last week in much the same way the investigation had begun several months ago—in disagreement. Carrier members of the board and the representative of the Brotherhood of Locomotive Engineers filed a 122-page report which indicated that there have been virtually no adverse effects from the removal of firemen. But the representative of the Brotherhood of Locomotive Firemen & Enginemen, refusing to sign the report, issued his own position paper and called the majority report "a complete hoax." Underscored once again was the bitter feeling existing between the two engine-service organizations. The BLF&E charged that an "alliance" of railroad representatives with the BLE had "prevented any study whatsoever." The Engineers' man on the board, however, denied that the BLE had "deserted" the firemen. Engineers, he said, would still very much like to have firemen restored—but every tribunal to consider the case has taken a different view, and "we are faced with 1966 . . . we must face realities."

Shrinking freight-car fleet? No longer

Latest equipment-data report from the AAR's Car Service Division puts the number of serviceable owned freight cars on U.S. Class I railroads at 1,404,835—896 more than the 1,403,939 reported a year ago. It's the first time in recent memory that the total car fleet has shown an increase, rather than a decrease, in the year-to-year comparison.

WATCHING WASHINGTON WITH WALTER TAFT

TAFT

CONGRESS reconvenes Jan. 10, but is not expected to get down to business until the principal Presidential messages are received. First of these will be the State-of-the-Union Message. Then will come the Economic Report and the Budget Message. In any of them, President Johnson might indicate what he may propose as his 1966 tranportation program. He did last year, saying in his State-of-the-Union Message that he would recommend "heavier reliance on competition in transportation." Thereafter, however, there was no 1965 Presidential call for legislation to implement this rate-freedom approach.

THAT FOLLOW THROUGH to legislative recommendations is confidently expected this year. Top Administration sources put transportation high on the President's legislative program for 1966. Moreover, the President has said himself that transportation policy proposals will be part of the substantive legislation he will call for this year.

THE RAILROADS, quite naturally, hope the Presidential proposals will be in line with top priority items of the industry's legislative program. That's likely, in view of the Administration's many endorsements of the rate-freedom approach, and its policy in favor of assessing adequate charges for use of publicly-provided transport facilities. The President's user-charge proposal is already before the Committee on Ways and Means in the House of Representatives.

IT's THE SAME CONGRESS that was in session last year, so this user-charge proposal and all other pending legislation remains alive. No rate-freedom proposals are pending, however—presumably because prospective sponsors have been waiting for specific recommendations from the White House.

THE HOUSE COMMITTEE on Interstate and Foreign Commerce will get a new chairman—Representative Harley O. Staggers (D.-W.Va.). This became clear when Oren Harris, on Dec. 28, removed uncertainty as to when he would leave Congress to assume the federal judgeship to which he was appointed by President Johnson several months ago.

HARRIS will leave Feb. 3, after 25 years of service as a congressman from Arkansas. Staggers has been a member of the House since 1949, and he served last year as chairman of the Committee's Subcommittee on Transportation and Aeronautics. If he relinquishes that position, it will probably go to Representative Samuel N. Friedel (D.-Md.).

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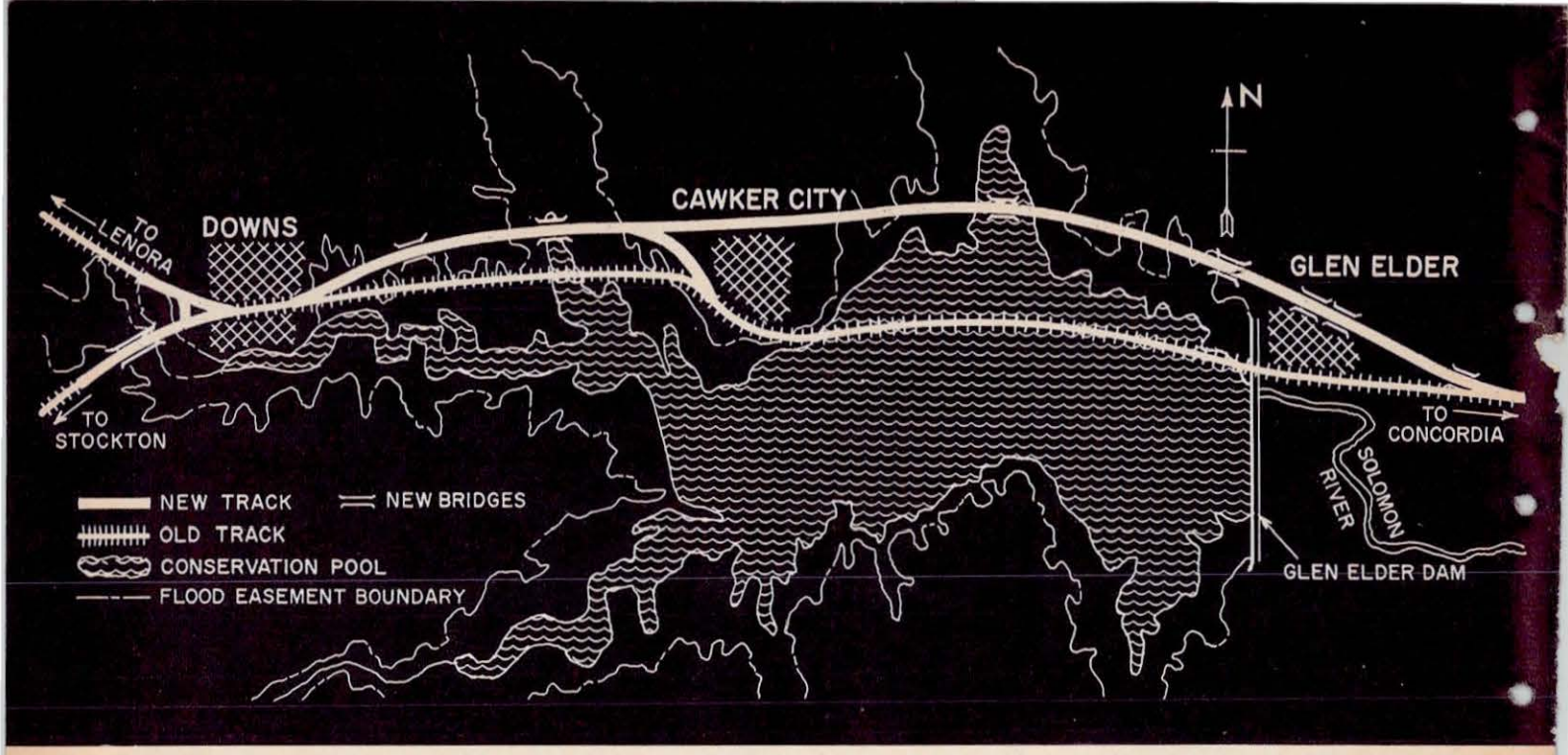


PERMANENT LAKE to be created by the new dam, which will submerge old MP line, will have an area of 4,800 acres.

MoPac: Line change with a difference

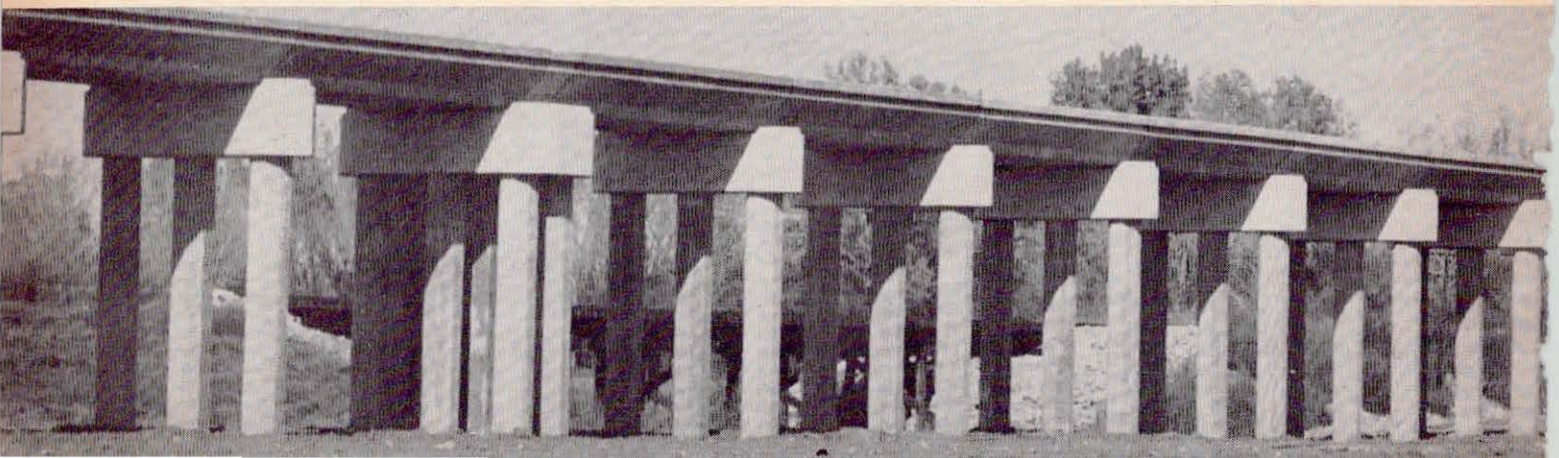
- **Many cost-cutting techniques are featured in Kansas project.**
- **Eight bridges were required, including seven over streams.**

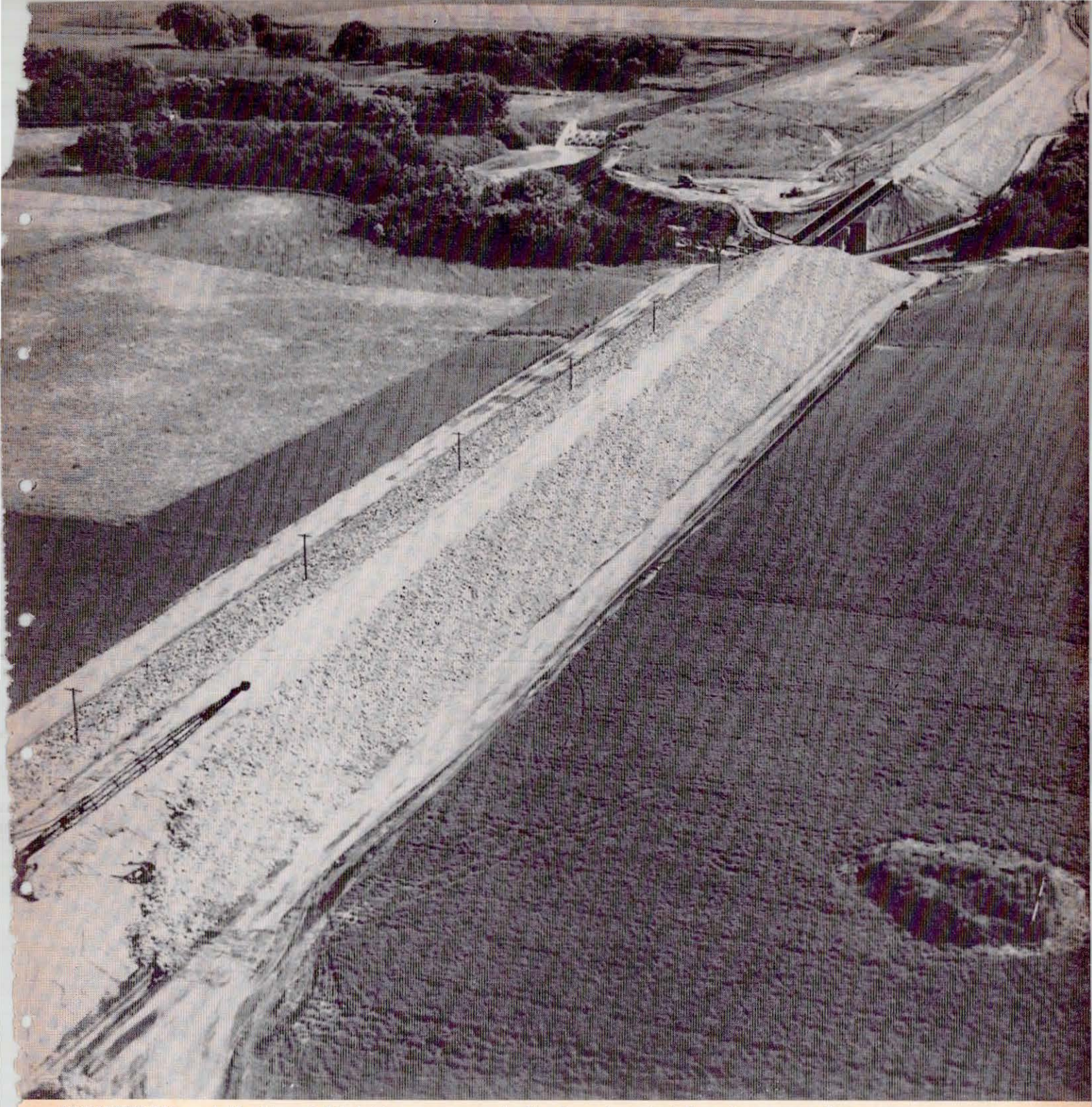
It is commonplace these days to see rails being hauled and laid in the track in the form of long strings. But who has seen rails transported to the site of installation in long strings and then disjointed before installation?

This unconventional but economical practice is being followed in the construction of a line change on the Missouri Pacific in Kansas. And MoPac engineers can give convincing reasons for doing it this way. Rail for the new line was taken out of jointed track in Louisiana, and they explain that taking the rails up in quarter-mile strings and hauling them to Kansas in that form was the most economical way of getting the rail to the job. They further explain that considerations of practicality and economy dictated that the strings be disjointed before the rails were laid in track.

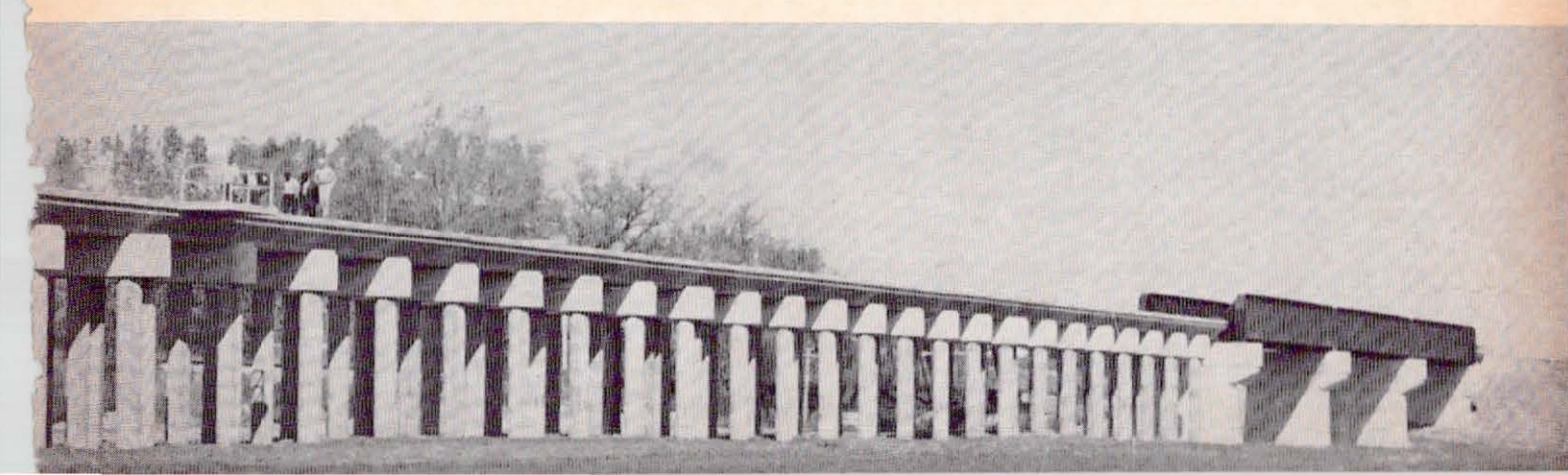
The line change where the rails were laid has other interesting aspects. One is that a section of line was raised 10 feet on the existing alignment by removing the track, constructing the em-

CONCRETE TRESTLE APPROACH at west end of bridge across North Fork Solomon River is 1,044 feet long.

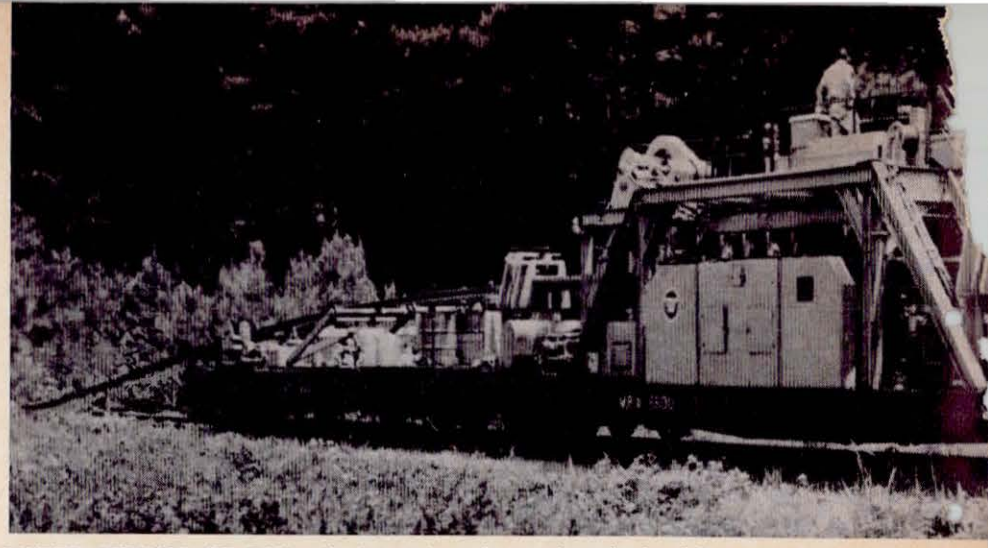




EMBANKMENTS on both sides of this bridge were covered with riprap to protect them from wave action.



Longest single steel span involved in the line change is a highway bridge. The bridge with the greatest combined length is a 1,344-ft river crossing with one 40-ft approach and one 1,044-ft approach.



JOINTED STRINGS OF RAIL, displaced by relay project in Louisiana, are being picked

bankment and replacing the track on the new subgrade. Another was the construction of a 1,000-foot concrete trestle approach to a new steel bridge, one of eight bridge structures required on the line change.

● **Required by dam project.** The line involved in this project is the Lenora and Downs subdivision of the MoPac's Omaha division. The main line of the subdivision extends westward across northern Kansas from St. Joseph, Mo., a point on the company's line between Kansas City and Omaha. Near Glen Elder, Kan., the Bureau of Reclamation is building a dam to impound the waters of the Solomon River. The location at Glen Elder was chosen because the river valley is slightly narrower here than anywhere else. Even so, the dam, which will be constructed of earth, will be about two miles long. It will eventually create a permanent lake of 4,800 acres, to be known as Waconda lake, and a possible maximum flooded area of 11,760 acres.

The line change was required to circumvent a section of the existing line west of Glen Elder that would be either permanently submerged when the reservoir is completed or occasionally inundated by temporary flood waters that would occur during heavy rainfalls. The relocated line, 19.4 miles long, is being built under an agreement negotiated between the government and the railroad.

Since the new line had to be located around the outer limits of the reservoir it is slightly longer (1.9 miles) than the original line. Also, slightly heavier grades were necessary to place the line on higher ground. Curvature, however, is less, which is attributable to the fact that the existing line follows the meanderings of the river whereas the new line utilizes the most direct route.

For its length the relocated line has an unusual number of bridges, at least for that part of the country. Because of the broad spread of the flood plain and the need to maintain free-flowing openings, some of the bridges and approaches are relatively long, particularly where they span streams where the water will be backed up from the body of the reservoir.

● **Eight bridges required.** Altogether, there are eight bridges, including seven across streams and one spanning a highway. There is one three-span concrete pile trestle. All the others involve one to three deck-plate girder or through-plate girder spans on concrete abutments and piers, with or without concrete-trestle approaches. The longest single steel span is the highway bridge. This is a 107-foot deck-plate girder span on a 36-degree skew, with a concrete trestle approach 102 feet long at each end.

Flood-plain problem

The bridge having the greatest combined length is a 1,344-foot crossing of the North Fork Solomon River southwest of the town of Downs. There, the normal river channel is crossed by three 96-foot through-plate girder spans. At the east end there is a 40-foot concrete-trestle approach. Because the flood plain is much wider on the west side of the river the concrete trestle approach on this side is 1,044 feet long.

Where the new line is carried on embankments subject to wave action the slopes are protected by rock riprap. This type of protection required 66,000 tons of crushed stone backing and 150,000 tons of riprap. The backing, along with 96,000 tons of sub-ballast, required for the track, was obtained from quarries some 50 miles away and trucked to the site.

Where county roads cross the new line at grade in cuts the tops of the slopes are cut back, or "daylighted," for some distance from the crossing. The purpose is to provide vehicular traffic with improved sight distances in both directions along the track as it approaches the crossing.

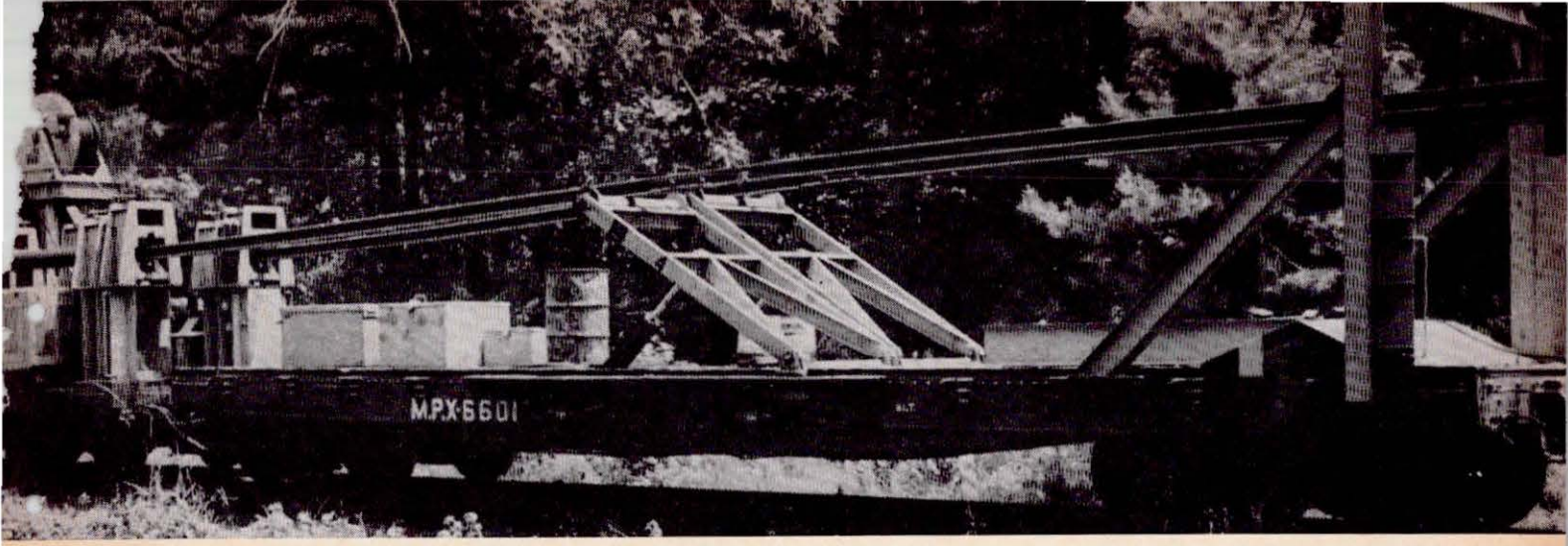
In planning the relocated line situations requiring that the existing track be raised on the same alignment were avoided if possible. In one instance, however, it was necessary to raise nearly a mile of branch line approximately 10 feet. This raise was necessary to bring the track up to the level of a levee to be constructed around the town of Downs.

● **Trains annulled.** Fortunately, at the time the work was done traffic was light so that it was possible to annul two tri-weekly service turns and thus to take the railroad out of service for four days. In this period the track was removed, the new embankment constructed and the track replaced in time to permit regular operation of the third trip of the tri-weekly service on this line.

Performance of the work in the four-day period was made possible only by careful planning and by completing all possible operations prior to the time the railroad was taken out of service. It was estimated that the cost of raising the section of line in the manner used was 60% less than that of raising it in place. The method employed would not, of course, be possible, on anything but a light-traffic line.

Since the new railroad is about a mile north of its present location at Cawker City, it was necessary to provide a connection to that city. This was done by constructing a lead track from the relocated line to connect with a portion of the existing main track that is to remain in service in the city.

● **Special rail train used.** The track of the relocated line is being built with 90-lb secondhand rail released from a



up and loaded here for trip to the line-change project.

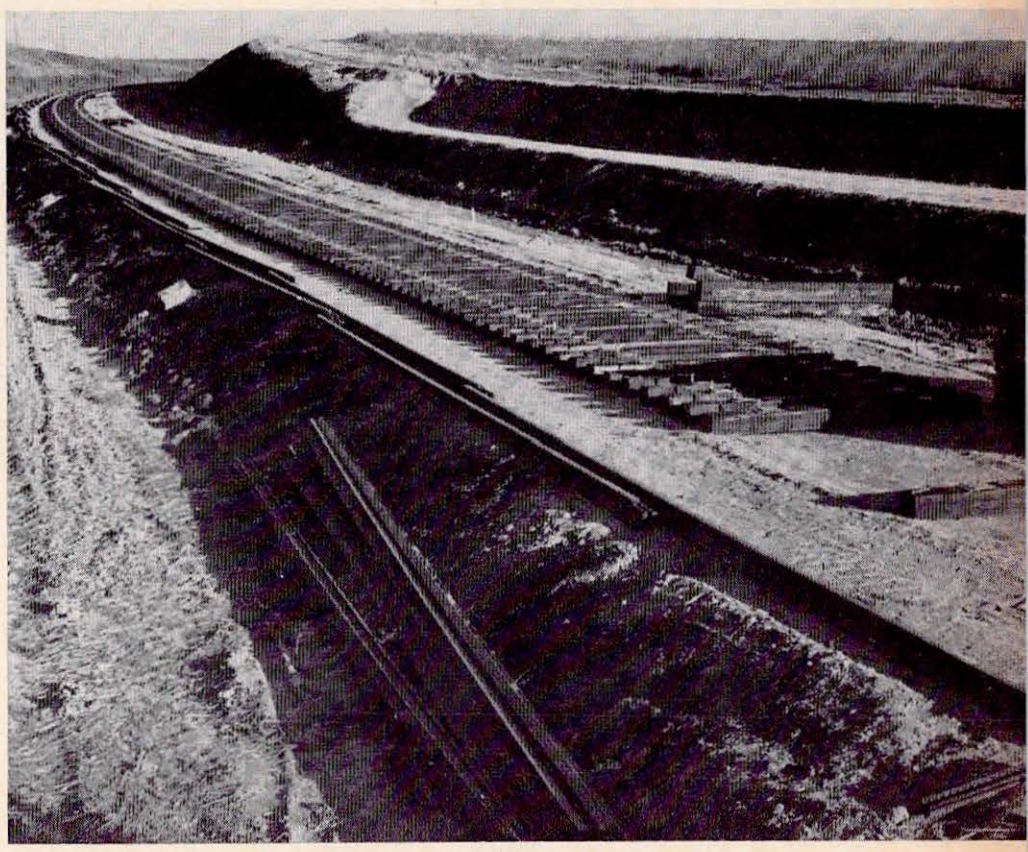
MoPac line in Louisiana in connection with a relay operation. The fact that the railroad has available a train specially equipped for picking up and loading long jointed strings of rail greatly simplified the problem of loading and transporting the rail.

The key feature of the special train is a dual-rail handling car with two parallel rail pushers patented by the National Cylinder Gas Division of Chemetron Corp., and manufactured by the Link Belt Co. The car is designed for laying dual strings of welded rail and picking up released jointed strings in pairs for subsequent relaying in a new location.

Main features of the pusher arrangement are two opposed pairs of crawler treads, with the lower tread of each pair being driven by a hydraulic motor. When the end of a rail string is threaded between the crawler treads of each pair and the hydraulic motor put into operation the rail is pulled through the treads and pushed back onto racks on a 33-car train coupled to the pusher car. Two long strings can be loaded simultaneously. The train has a capacity of forty quarter-mile (1,400-foot) strings.

● **How MoPac uses the train.** MoPac placed the train in service as a means of loading and transporting old rail resulting from relays without the necessity of first disjointing it. Recovery of rail in this manner, says a railroad spokesman, is more economical than dismantling the lengths and handling individual pieces.

The schedule for transporting the jointed strings to the site of the line change permitted only a day for unloading the strings. It was not possible, therefore, to unload the strings directly onto the ties and to move the train over the track as each successive pair of rails was unloaded and spiked down. It was necessary to unload all of the rail strings at the east end of the project in an area where a setout track was built.

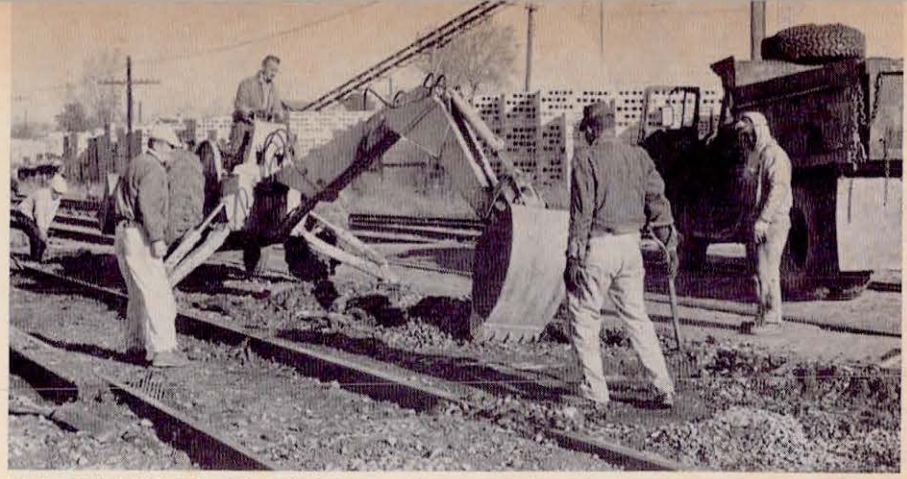


WITH TIES IN PLACE AND RAILS DISTRIBUTED ON SHOULDERS the rails will be laid by rubber-tired crane with flanged wheels. Note "daylighting" of cut to provide better visibility for vehicular traffic crossing on country road at this point.

The rail strings were then dismantled and the material moved to the point of installation on trucks. Constructing the track in this manner had the advantage of assuring proper gaps at the joints and of avoiding the risk of broken bolts or bars occurring as a result of handling the jointed strings.

In preparation for constructing the track new ties were trucked out ahead in bundles of about 45 each, and then distributed on the roadbed. The rails were picked up from the shoulder and placed in track by a rubber-tired Schield Bantam crane equipped with flanged wheels.

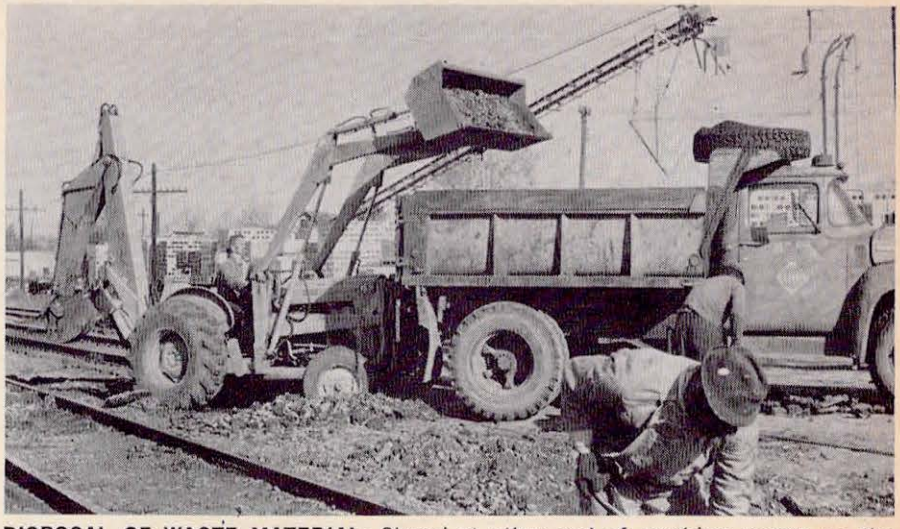
Construction of the line change got under way in October 1964, with Van Buskirk & Graves, Sioux City, Iowa, doing the grading and bridge building. Track construction is being done by Grosshans & Petersen, Inc., Marysville, Kan. It is expected that service will be cut over to the new track in late February. ■



OLD PAVEMENT IS REMOVED: Main piece of equipment is the Fordson combination front-end loader and back-hoe. Bucket teeth rip up old surface.

Why E-L uses small crossing gangs

Revamping of crossing-maintenance operations means that fewer men do more work, at less cost.



DISPOSAL OF WASTE MATERIAL: Shovel at other end of machine scoops up the loosened material and loads it onto dump truck for disposal elsewhere.

Specialize and mechanize are key words that have guided M/W officers in their efforts to place the work of their departments on a more efficient basis. They have been applied to just about every operation that lends itself to systematic planning and execution, even including the repair and rehabilitation of tracks through highway grade crossings.

The Erie Lackawanna is an example of a road that has revamped its grade-crossing work. Prior to 1965, such work on this road was usually handled by the section forces. Necessary excavation work was done by hand. However, if a number of crossings had to be rehabilitated in advance of a track-surfacing operation, a crossing gang of about 20 men would be organized to do the work. The gang would be provided with a locomotive crane, and generally work-train service would be needed.

Beginning last year all this was changed. The practice was started of handling grade-crossing repairs and renewals with small specialized gangs. Each gang is provided with a complement of equipment especially selected for its applicability to the operations involved. One such gang has been organized on each of the road's six operating divisions. The purpose is to get more work done with fewer men and at less cost.

● **Inspection precedes work.** Under the new plan road crossings are inspected in the fall of the year ahead of the actual work. In particular, the crossings inspected include those in territory where out-of-face tie-renewal and surfacing operations are scheduled. The inspection also includes crossings where state, county or city highway improvements are contemplated, as well as any crossings about which local complaints of riding conditions have been raised.

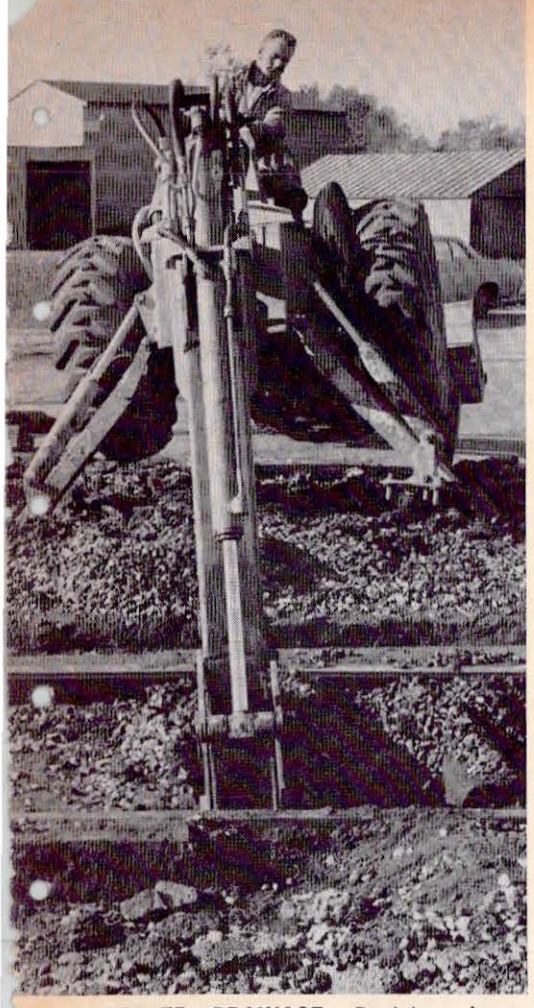
For the most part, the amount of road-crossing work is dependent upon the track-surfacing program for the year. The aim is to rehabilitate the crossings ahead of such work. Track conditions through road crossings are also an influencing factor. In general, the E-L has found it necessary to tamp the track through crossings at least once in every four years on heavy-traffic lines and to rehabilitate such crossings every seven years.

The bituminous type of road crossing is standard on the E-L. Ordinarily, no timbers are used as headers or outside the running rails, nor are flangeway rails used.

When the road-crossing-repair program has been decided upon, the amount of bituminous material required is determined. Information as to the location of the work and the quantities needed is given to the purchasing department which then places blanket orders at appropriate plants from which the material can be drawn as required by the local track supervisor.

● **Only seven men.** The typical crossing gang consists of seven men—a foreman, a machine operator, a truck driver and four trackmen. The operator has district seniority status and is provided with a house trailer. The other men have subdivision seniority but their headquarters can be moved.

The principal unit of equipment furnished to each gang is an industrial-



BETTER DRAINAGE: Back-hoe is replaced by cribbing attachment so that old ballast can be replaced by new stone in cribs and at ends of ties.

type Fordson tractor with a front-end loader, a back-hoe and a crib-trenching attachment. Other equipment includes an Ingersoll-Rand 60-cfm crawler air compressor with air-spiking hammers and tamping guns, and a 10-ton Littleford road roller, plus miscellaneous track tools. The foreman has use of a division-assigned 5-cubic-yard dump truck which he uses for disposing of excavated material and for hauling and spreading ballast and the bituminous materials.

The crossing-renewal program starts about April 1 and continues until about Oct. 31. The actual date the work is terminated is dependent upon the temperature because, since a hot-bituminous mix is used, the suppliers stop production when the temperature reaches freezing.

● **Prior arrangements.** A preliminary step is for the foreman to contact the proper authorities with the aim of having vehicular traffic removed from the crossing while work is in progress. Sometimes, where a state road crossing is involved, a city or county will not permit the state to detour traffic over their roads because of the damage inflicted by heavy trucks. In such instances, the work becomes more difficult because only half the crossing can be taken out of service at a time.

The first step in performing the actual work is to break up the old bituminous surface, using the back-hoe attachment on the tractor. Although a relatively light machine, this unit can break up pavements 8 inches thick. While the machine is working, trackmen load the broken chunks into the dump truck.

Next, the back-hoe attachment is replaced with the crib trencher and the tie cribs are dug out. Following this, the trencher is used to dig a drainage trench along the ends and about one foot below the bottoms of ties. Some crossings have previously-installed drains at this location. In such cases, the tiles are carefully removed, cleaned out and replaced. The front-end loader is used to load the waste ballast material.

With the track in the crossing thus exposed, a careful examination is made of the ties, bars, plates and rails. Crossties that won't last five years are renewed. Corroded tie plates and small plates are replaced with new plates. Tie pads are installed under the plates. Where possible, the joints are removed to a location outside of the crossing area. Any rails showing filet cracks or head-and-web separations are replaced.

● **Track is raised.** After the track work has been completed the side trenches and cribs are backfilled with fresh stone brought in and dumped by the truck. A track raise of three to four inches is made and the ties tamped, using the air-tamping tools. Grade runoffs are made at each end.

Hot-mix blacktop material, hauled in by the dump truck, is spread to fill the track area to the tops of rails. It is rolled to a slight crown between the rails to reduce the impact of tires against the rails.

The Erie Lackawanna has found that a crossing gang will complete one track per working day at double-lane county-road crossings as well as at single-lane farm crossings. Longer crossings require more time—especially those on which work must be done under both vehicular and rail traffic—sometimes up to two weeks.

Commenting on the performance of the crossing-renewal gangs, an E-L spokesman said they have eliminated the work trains formerly used. Also, because the men have become proficient, the work is accomplished better and faaster, he said.

The grade-crossing gangs were organized and the program of work established under the direct supervision of W. A. Swartz, E-L engineer maintenance of way, and under the general direction of R. F. Bush, chief engineer. ■

FINISHING CROSSING FOR TRAFFIC: Final operation is the dumping of new bituminous hot mix and rolling it to a smooth surface by Littleford road roller.

With men who know their locos best...

...like Gordon H. Kendall, General Superintendent of Motive Power for the Louisville and Nashville Railroad, for example. He knows the kind of guts it takes for locomotives to meet gruelling schedules...day in and day out. Schedules which involve the hauling of heavy coal trains...on time...over heavy grades without doubling.

That's exactly what Century 420's do for the L&N. Kendall refers to these ALCO four-axle, 2000 hp units as "work-horses." Here's what he reports, "Operating in consist, five of our 420's do the work that formerly required seven 1500 hp units."

Expensive to maintain? Hardly! Powered by mighty ALCO 251 diesels ...prime source of energy for all Century locomotives. Engines that provide effective performance under all kinds of operating conditions. Engines that thrive on standard railway lubricants. And because of higher thermal efficiency, they deliver more — much more — power from every gallon of fuel consumed at lower maintenance costs.

Of course 420's, like all Century models, place less parasitic load per horsepower on their engines than any other locomotives in railway service today. In fact, the entire range of Century motive power (from 2000 hp to 5500 hp) gives any railroad plenty of reason for specifying ALCO. Feature-for-feature and dollar-for-dollar, they've outperformed any other locomotive you could buy.

So why not ask Gordon Kendall...or other men who know their locos best...about ALCO Century's. Then you won't have to take our word for it. You'll know!

On the basis of ton miles per gallon, per dollar, per unit — no other locomotives are meeting ALCO Century performance standards.

Century 855...5500 hp; Century 643-H...4300 hp diesel-hydraulic; Century 630...3000 hp; Century 430...3000 hp; Century 628...2750 hp; Century 425...2500 hp; Century 424...2400 hp; Century 420... 2000 hp; DL-440...1000 hp.

Your ALCO man has complete information on all Century models... America's first full-range series of modern motive power.

New 3000 hp locomotives join ALCO's Century fleet

Century 630. AC Rectified Transmission ...six axles...six motors

Century 430. AC Rectified Transmission ...four axles...four motors

In the Century 630 and 430, ALCO has replaced the conventional DC generators with AC alternators that are easier to protect and insulate. This innovation eliminates all generator commutator problems...reduces the size and weight of generating equipment. And, since there are fewer moving parts, such as drive gears, belts, slip rings and brushes, maintenance is greatly reduced. Solid-state silicon rectifiers convert AC to DC for the DC traction motors. The capabilities of this system eliminate traction-motor field shunting.

The prime source of power for both the Century 630 and 430 is the "E" version of ALCO's *proved* and *improved* Model 251 diesel engine. Vee type. 16 cylinders. Four cycle. 9-inch bore. 10½-inch stroke. Rated 3000 hp for traction. Features a newly-designed aftercooler for better engine aspiration...is supercooled by a separate radiator system.

With the advent of the AC alternator in Century units, ALCO becomes the only domestic locomotive manufacturer to offer three power transmission systems: direct-current, rectified alternating-current, and diesel hydraulic.

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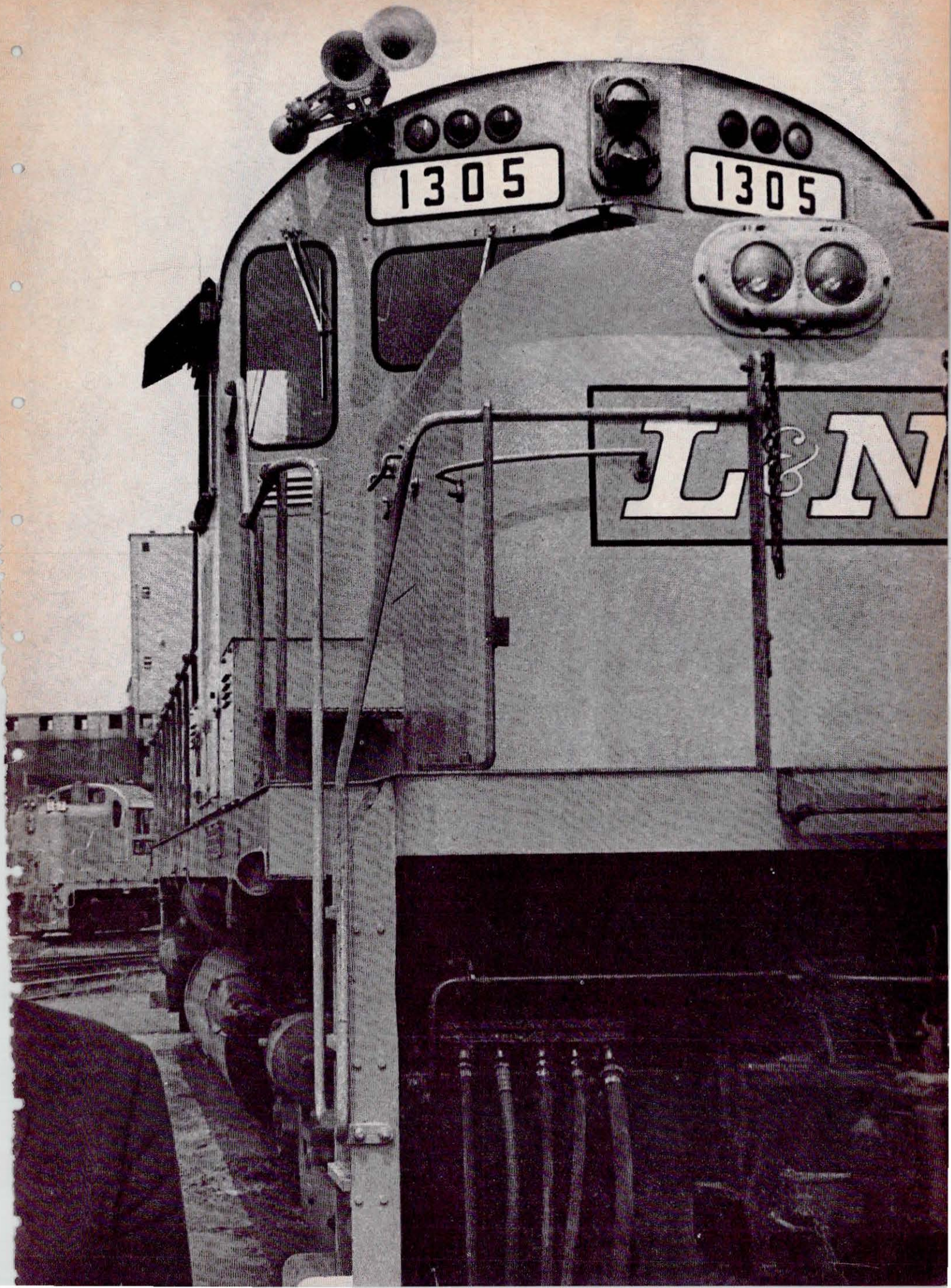
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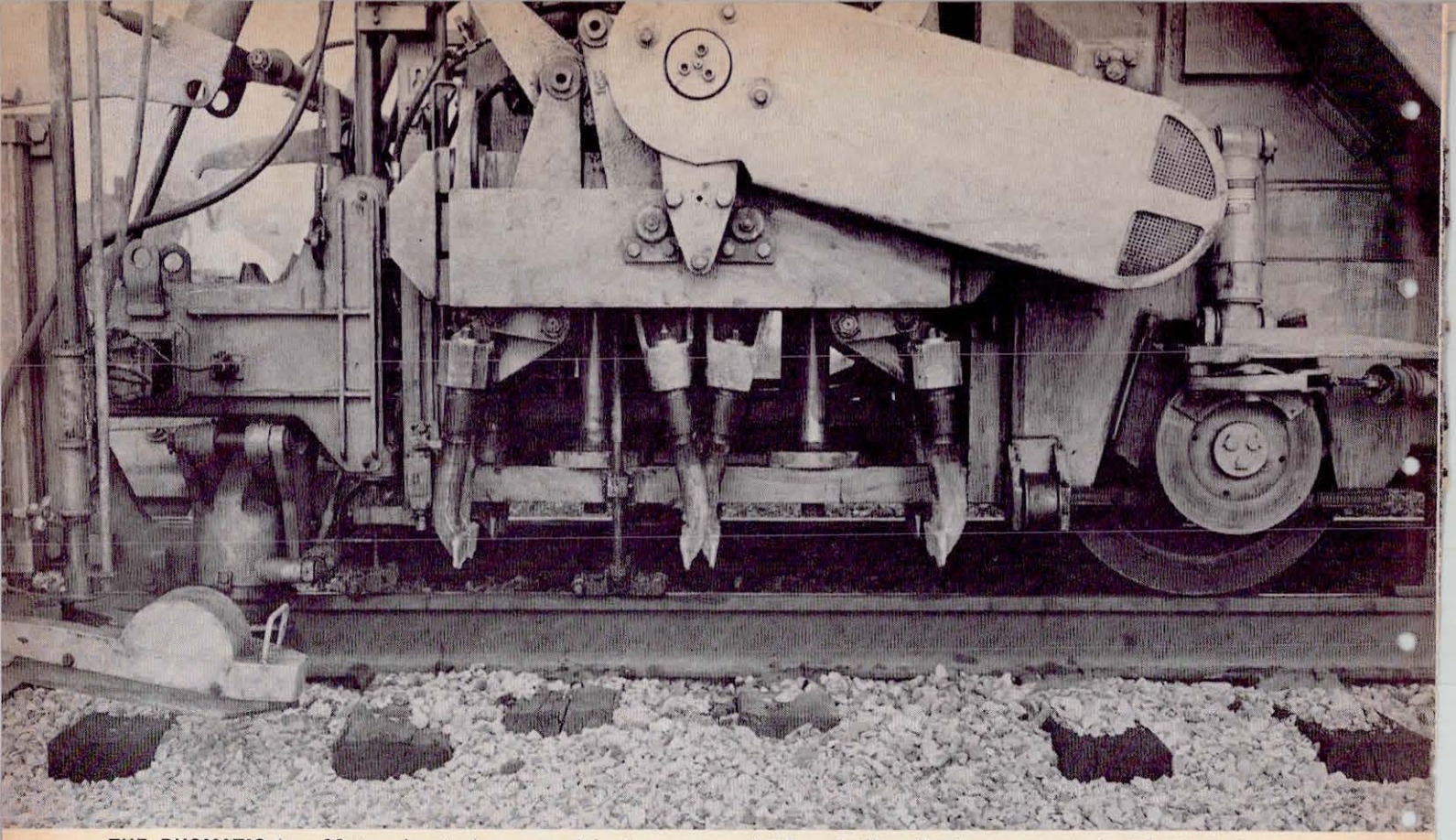
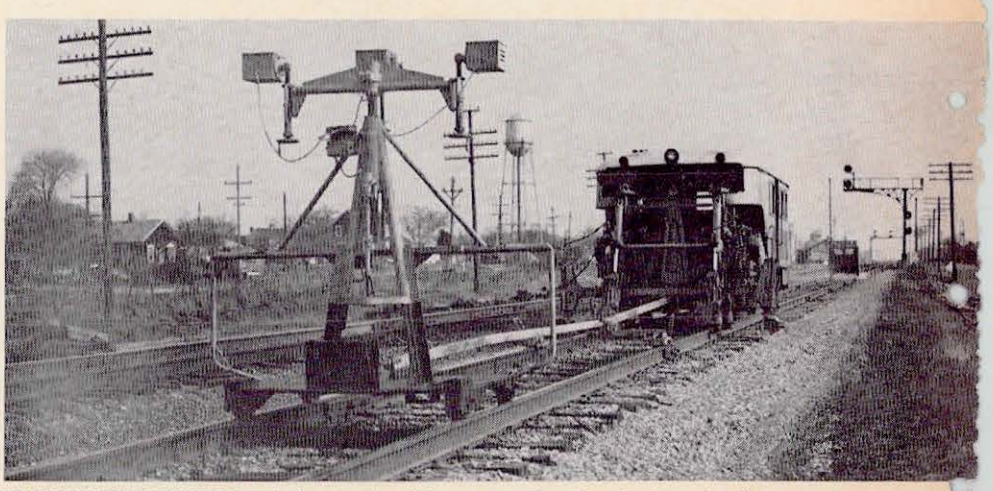


THE DUOMATIC has 32 tamping tools arranged in two groups of 16 each. The vibratory-squeeze principle is used.

Are two heads better than one?

Tests of dual-headed tamper indicate the answer is 'yes.'



AUTOMATIC CONTROL of the track-raising operation is obtained by infrared beams projected from a forward buggy.

In a situation where one head has been doing the job, will two heads do twice as well? This question could be asked of almost any activity but as raised here it refers to production tie tampers.

Until recently such machines have been built to tamp one tie at a time. But last year a machine was introduced that is designed to tamp two adjacent ties simultaneously. During the summer and fall months of the year the dual-head tamper was tested under service conditions on the Santa Fe.

Since the machine was the pilot model it was not expected that it would give continuous trouble-free service from the beginning. Even so, Santa Fe officers who have observed the tamper in action have expressed themselves as being well satisfied with its capabilities and performance while working.

As for the manufacturer, the demonstration was seen as an opportunity to determine what changes or improvements would be needed in the machine to assure optimum performance. Improvements were incorporated as the need for them developed during the demonstration. At one point it was taken out of service for a time to permit installation of a more powerful engine.

The machine that was the subject of this demonstration is labeled the Plasser Duomatic 06-32L. It lifts, levels and tamps the track two ties at a time. Tamping is done by 32 hydraulically operated tamping tools utilizing the vibratory-squeeze principle featured by all Plasser machines. The tools are arranged in two groups of 16 each and are mounted to function as a single head in tamping two adjacent ties.

• **Automatic control.** The dual-head tamper is a one-man machine equipped with an automatic track-raising system similar to those used on other late-model Plasser tampers. On the Duomatic this includes a forward buggy which, pushed ahead of the tamper by a tubular member, has three infrared-beam projectors. Through the use of shadow boards and receivers on the tamper the beams are used to effect automatic control of the track-lifting operation.

Where a small raise is being made the track is lifted by roller clamps mounted on the front end of the tamper. For higher lifts, outside jacks on the machine are used. The jacking and tamping cycle takes place automatically after the machine has been spotted for tamping a pair of ties.

• **It's a big machine.** As might be expected the Duomatic, as to length anyway, is a relatively big machine as production tampers go. When prepared for travel its length is 34 feet 3 inches. Height in travel condition is 11 feet ten inches and width is 8 feet 7 inches. Top travel speed is a rather surprising 40 mph, using a five-speed change-over gear for both directions.

For turning the machine 180 deg, a turntable with hydraulic lifting cylinder is provided at the center of gravity. The same cylinder, used in conjunction with transverse set-off wheels, permits the machine to be removed from the track.

An attachment that makes corrections in alignment automatically as the track is raised and tamped has been developed for use with the Duomatic. However, this attachment, originally installed on the pilot model, was removed from the machine after it had been delivered to the Santa Fe. The reason for this is that it was desired to concentrate attention for the time being on perfecting the surfacing and tamping functions of the unit.

• **Main-line test.** The Duomatic was delivered to the Santa Fe about the middle of July and was put to work on the road's double-track main line near Streator, Ill. In this territory the track construction includes 132-lb rail, crushed slag ballast and 24 ties per panel. The assignment for the tamper was to give the track an out-of-face skin lift of about 1 inch behind a tie-renewal operation. Other machines working with the Duomatic were an RMC track liner with a Nordberg Line Indicator and a Kalamazoo ballast-equalizing unit.

In addition to the foreman the crew consisted of three machine operators and four laborers. Normally, one of the laborers stayed with the tamper to perform such work as was necessary. The others were able to spend much of the time assisting the local section gang in removing track-car set-offs and doing necessary grade-crossing work ahead of the track-surfacing operation.

• **How it performed.** One of the main questions that may be asked regarding a dual-head tamper is whether problems are encountered in getting the tamping tools into the cribs. A Santa Fe spokeman who had seen the machine in action said it was his observation that, at least with the tie spacing of 19½ inches that prevails on the Santa Fe, the performance in this respect was not any different than that of a single-head tamper.

Other points noted by the same man are that the action of the tamping blades tends to straighten and space the ties and that there was no deflection of the rails on tamped track under the weight of the machine.

• **Rate of production.** With a dual-head tamper the production rate achieved is all-important because the principal reason for tamping two ties at a time is to boost the production of a one-man machine. During the Santa Fe demonstration this feature was carefully observed. The foreman on the job stated that under ideal conditions it wasn't unusual for the Duomatic to tamp at the rate of a rail length per minute. Continuous operation at this rate would give an hourly production of over 2,300 feet.

Another Santa Fe spokesman places the average production of the machine somewhat under this figure. On the basis of production reports made to the roadmaster by the foreman this spokesman said the production capability of the machine under conditions like those encountered on the Santa Fe should average about 1,900 feet per hour, not quite double the average production claimed for late-model Plasser single-head tampers. In his opinion the only thing th t would slow down the production rate appreciably would be a condition of extremely poor spacing of the ties.

• **Now on the SAL.** At the end of November, with both railroad and manufacturer satisfied that the Duomatic had given a good account of itself, the machine was shipped to the Seaboard Air Line where it is being demonstrated in the vicinity of Savannah, Ga.

On the basis of experience with the Duomatic on the Santa Fe the manufacturer is convinced that the machine has progressed beyond the experimental stage. A production model incorporating features and improvements indicated by the service testing on the Santa Fe is now being developed and will be marketed in 1966. ■

AS THE PUBLISHER SEES IT...

The need for change—for constant reexamination of what's being done with the view that it might be done better—is a recurring theme in these pages. The aim of this issue of Railway Age is to show our readers that we practice what we preach.

For several months our editors and artists have been working on changes which we believe will make Railway Age an even more valuable and easy-to-use tool for railway managers. You have, by now, seen the results.

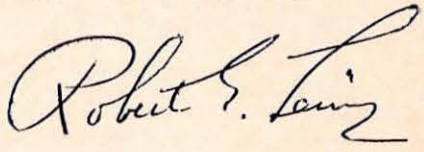
We have further modernized our front cover to take advantage of the latest thinking in magazine design. The contents page has been reworked for easier, faster reading.

Taking the view (as our own promotion ads put it) that "busy men can't wait," we are strengthening our late news coverage by creating a new "Week at a Glance" section (pp. 11 and 12). This has been done at no expense to our regular news pages—Short & Significant, Monday Morning Report, Market Outlook, You Ought to Know—or to our in-depth coverage, elsewhere, of traffic, mechanical, engineering and signaling and communications developments.

As the only newsweekly edited exclusively for the railway industry we have one over-riding objective: to report the news *as it happens.*

What's behind the news is also important. That's why we are also introducing a weekly column, "Gus Welty's LINES ON LABOR" (p. 25). Certainly, no single area is more important to railway managers today than that of labor relations. Gus Welty, our senior editor in Chicago, has specialized over the years in labor reporting. Through his fair and incisive presentation of the facts (and his exposure of certain fancies), he has, we believe, won the confidence of both unions and managements.

Such changes as these are motivated solely by our desire to publish a newsweekly that is of maximum benefit to our readers and our advertisers. Let us have your own comments and suggestions. If we fumble, you kick.



Room at the top—for the operating man

Who are the new presidents? Mostly, they are men up from the ranks on the operating-engineering side.

Top officers today are, generally, younger—and they have a new mobility, a new adaptability in their jobs.

Edd H. Bailey
UP

J. W. Barriger
Katy

B. F. Biaggini
SP

C. D. Buford
P&LE

M. M. Christy
WP

J. E. Gilliland
Frisco

G. W. Maxwell
E L

Louis W. Menk
Burlington

Just a few years ago, an ambitious youngster who yearned to be a railroad president would have been well advised to get himself a law degree, practice corporate government law for a spell and then set his sights on a railroad job.

Now, however, that eager youngster's best chances seem once again to lie in an engineering degree and the ladder-to-the-top that leads through the engineering-operating end of the business.

● **It's the law?** A half-dozen years ago, there was one chance in three that a newly elected railroad president would be a lawyer. A survey of the men who rose to the top in the 1957-59 period (RA, July 27, 1959) showed that seven out of 20 had backgrounds in the legal profession. Operating men also took over seven presidencies; and the other six were scattered among men with various railroad and non-railroad backgrounds.

A survey today, though, shows that the engineering-operating fraternity has solidly re-established its claim to precedence among presidents. During the past five years, 75% of the men elected to head major railroads have taken what's usually been regarded as the traditional route to the top. Lawyers, traffic men and executives drawn from outside industry split evenly the remaining jobs filled thus far in the '60s.

A Railway Age head-count puts the total at 33 presidents since 1961—with engineering-operating supplying 25 men and two each coming from law, traffic and finance departments and from the outside.

● **Changes at the top.** This renewed dependence on the men who actually run the railroad is the most clearly defined shift which shows up in the survey — but it's not the only one. Among other top-level developments of the '60s:

—Turnover in top jobs seems to be on a mild upswing. Over the past half-decade, at least five roads have had three presidents each and two major carriers have had four each.

—The mobility of railroad executives also seems to be increasing. Of the 33 presidents on the survey list, 10 have been presidents of two different railroads—consecutively or concurrently—since Jan. 1, 1961. Four of these situations were involved in one way or another with mergers or control changes, but six were distinct job switches or additions.

—Added weight seems to be going to the job of chairman, with several significant instances of the pairing of "chairman and chief executive officer."

● **Multiple switches.** The list of roads where the presidency has changed hands more than once since the start of the '60s includes such properties as Katy; Frisco; Duluth, Missabe & Iron Range; Terminal Railroad Association of St. Louis; New York, Susquehanna & Western; Baltimore & Ohio, and Rock Island. In the case of B&O and RI, four men have held the title. On B&O, Jervis Langdon, Jr., became president in 1961 when H. E. Simpson moved on to chairman. After Chesapeake & Ohio assumed control of B&O in 1962 and when Langdon accepted Rock Isand's call in 1964, C&O Chief Executive Officer (and B&O Chairman) W. J. Tuohy was elected to the B&O presidency. Then, in 1965, C&O President G. S. DeVine was

named also as president of B&O. On Rock Island, the '60s started with Downing B. Jenks at the helm. When Jenks took the presidency of Missouri Pacific, RI Chairman J. D. Farrington assumed the presidency. He was succeeded by R. E. Johnson, former RI operating and executive vice president, who was followed in the job by Langdon.

• **Men and mobility.** Jenks and Langdon are two of the industry's presidents who have demonstrated a mobility in moving from one top job to another—but they have quite a bit of company.

Louis W. Menk became president of Frisco in 1962, succeeding the late Clark Hungerford, and moved to Burlington in 1965 upon the retirement of Harry C. Murphy. G. W. Maxwell is a former president of TRRA; now he's heading up Erie Lackawanna. John W. Barriger was Pittsburgh & Lake Erie's president. When he retired from the job in Pittsburgh, he moved over to Katy, as chairman and president.

Herman H. Pevler went from president of Wabash to president of Norfolk & Western before the Wabash became (by lease) part of the N&W system. L. H. Murray went from president of Duluth, South Shore & Atlantic to president of Soo Line, after Soo came into being through a three-way merger of affiliated companies. W. N. Deramus, III, moved over from Katy to Kansas City Southern. Tuohy and DeVine have each held the president's title on both B&O and C&O. In addition, F. W. Okie, president of Bessemer & Lake Erie and Union as the decade began, now holds the presidency of most of the U.S. Steel roads, including DM&IR and Elgin, Joliet & Eastern. And there's Stuart T. Saunders, who moved from the presidency of one road (Norfolk & Western) to the chairmanship of another (Pennsylvania).

• **How about the chairman?** With these two elements—corporate turnover and individual mobility — has also come, or so it seems, a new look to the job of chairman. To an increasing extent, the man holding the chairman or chairman-of-the-board position is an activist in management—not merely a man who presides at board meetings.

This is the kind of job Ben W. Heineman made of the chairmanship (at Chicago & North Western) in the 1950s. In the 1960s, he's been joined by such men as Tuohy, chief executive officer at C&O and chairman of the board at B&O; Saunders at Pennsylvania; Barriger at Katy and Langdon at Rock Island; William White, chairman at Delaware & Hudson and chairman and chief executive officer at E-L; and Menk, followed by Jack E. Gilli-

GUS WELTY'S

LINES ON LABOR

WELTY

NEW YEAR'S FIREWORKS—Ordinarily, it's the Chinese New Year that's celebrated with firecrackers and such. But in 1966 two labor organizations greeted January with lit fuses—the Transport Workers Union in New York and the Brotherhood of Locomotive Firemen & Enginemen all across the country. The TWU handed four million commuters their walking papers, as the city's subway system came to a complete halt for the first time (aside from last November's power failure). And the BLF&E handed about 190 railroads a lengthy list of wage-benefit demands, topped by a proposal for a 25% increase in basic wage rates.

WHAT THE BLF&E WANTS—For the industry at large, of course, the Firemen's notice is the big item—and it's a really big one, as it stands. An even dozen demands are set forth, starting with the wage boost and moving through such things as a cost-of-living adjustment, daily and monthly work guarantees, night-shift differential pay of 20 cents an hour for all time worked between 6 p.m. and 6 a.m. and a carrier-financed supplemental pension program. But that's not all. The BLF&E also wants an increase in daily earnings minimums of $5 in freight, passenger and other road service; payment of double time or double mileage for employees held in service in excess of monthly maximum mileage; improved lodging and meal allowances for men held away from home terminal for three hours or more; and the addition of 10% interest to amounts due employees if the carrier delays for more than 60 days the payment of penalty claims for contract violation.

A DEMAND IS A DEMAND— It should figure that the BLF&E entertains no real hope of getting 25%. It should also figure that some of the other demands are in the notice only so they can be bargained away later. At the same time, however, there are certain parallels that might be drawn between the new notice and the one filed by the union in a wage dispute which was finally settled in December 1964. Then, too, the BLF&E demanded 25%. It got (after emergency-board proceedings) a two-stage increase totaling $1.44 per day.

THINGS HAVE CHANGED—Since '64, however, a lot has happened. The ranks of the firemen have been thinned as the effects of the fireman-off arbitration award have spread. Union rivalries have been intensified (and there could be some question as to whether the other ops will feel comfortable having the BLF&E lead off 1966 wage movements). Now, matters of timing put the Firemen in the position of trying to support two movements at once since the union is also committed, as of last November, to attampt to restore jobs blanked and men severed under the arbitration award.

WHAT ABOUT COST?—One thing the Firemen do not do in announcing their new demands is to put a price tag on the package. But if—just if—a 25% wage boost were to go into effect, and if it were applied across the board, the industry would have to turn over the equivalent of its entire '65 net income. And then go to the bank for a loan to meet payroll. Based on current wage-cost figures, a 25% increase would cost just about 150% of last year's total net of $775 million.

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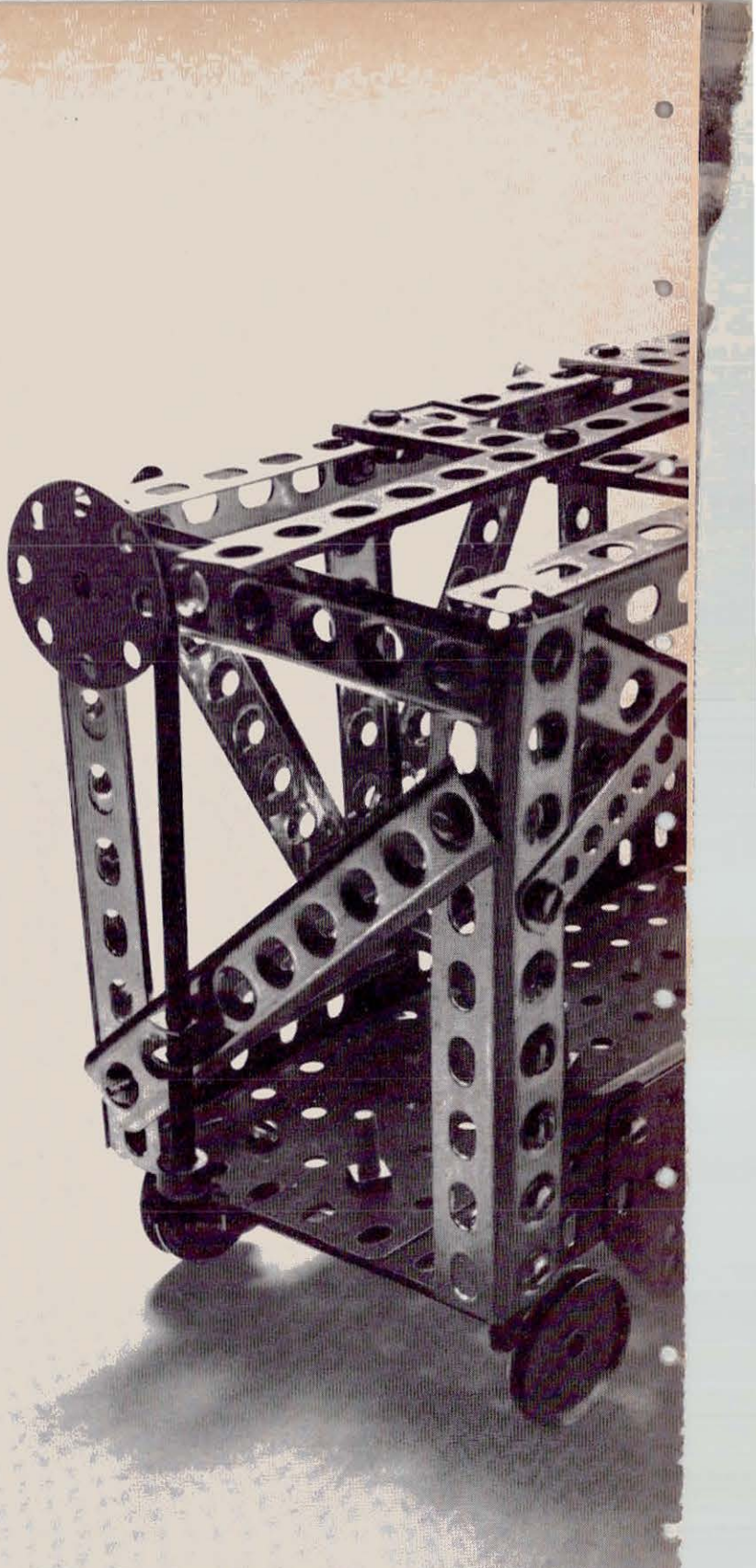

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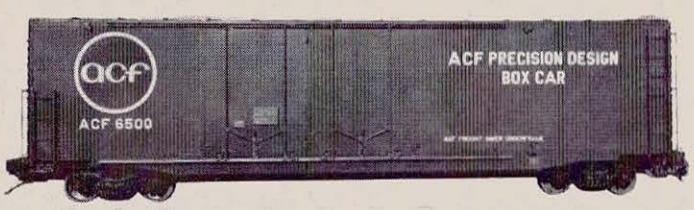

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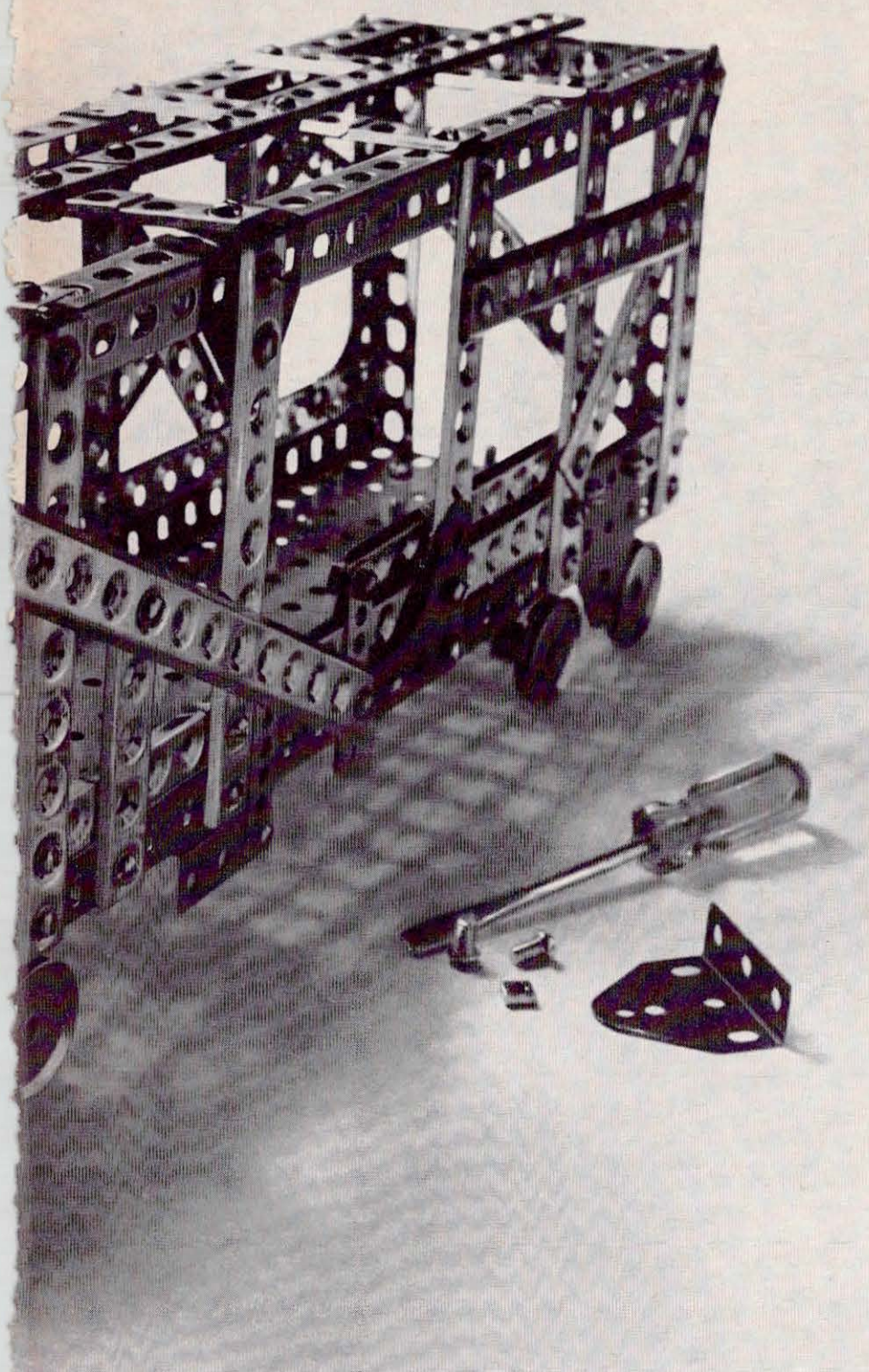

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When U.S. railroads can make that statement, we'll all be better off—especially the transportation-buying public.

WASTED COMPUTERS?—Irwin Goldstein, project manager for the consulting engineering firm of Theodore J. Kauffeld, has favored us with some thoughtful and probing comments on the use—and the misuse—of computers. Our Dec. 20/27 Monday Morning Report (p. 8) explored the potential of computers in R&D work. This report noted that a certain railroad had used a computer to help establish that "horsepower on four axles is not the same as it is on six axles." Mr. Goldstein considers this to be a misuse of computers, that problem being, in his view, one for a slide rule.

As he sees it, "Until rational inputs are used and productive programming is considered, instead of merely churning out reams of useless paper, the computer in the railroad industry will experience excessive waste. A railroad should be thought of as a system, not a bunch of independent entities."

(Mr. Goldstein will find in enthusiastic agreement with this thesis such railroads as the Southern, the New York Central, and the Louisville & Nashville, which, among others, have harnessed computers to system operations.)

Getting back to R&D, Mr. Goldstein feels that "there are just too many basic and elementary problems to be solved before the industry wanders off into Lasers, fluid transistors, etc. The biggest problem, for example, is: Can the industry do better than *2-mph* average of total freight-car utilization? Remember—they only average 45-50 miles per day and the cash register rings when the wheels turn."

STEEL'S NO. 1 CUSTOMER—For the past decade or so, Detroit has been the steel industry's biggest single customer. Now (reports Steel Magazine) railroads have moved into the number one spot.

Steel is also a big customer of the railroads—and it's a pleasure to pass along the prediction of Joseph L. Block, chairman of the Inland Steel Co., that steel consumption in the first half of 1966 may exceed the like period of 1965 by as much as 4%.

MR. REISTRUP'S QUESTION—Last year the Post Office diverted $1 million worth of mail traffic from the C&O-B&O, at the same time assuring the railroads that they wouldn't have to maintain standby service. But the motor carriers proved inadequate for the job at Christmas, and C&O-B&O (though under no obligation to do so) stepped back into the picture. Now, Paul H. Reistrup, C&O-B&O director of passenger services, poses a question that should (but probably won't) cause some second thoughts in Washington: "What's going to happen next time they need us—and the trains are out of operation?"

land, as both president and chairman at Frisco.

Quite a few factors may figure in these changes in the make-up of top railroad management.

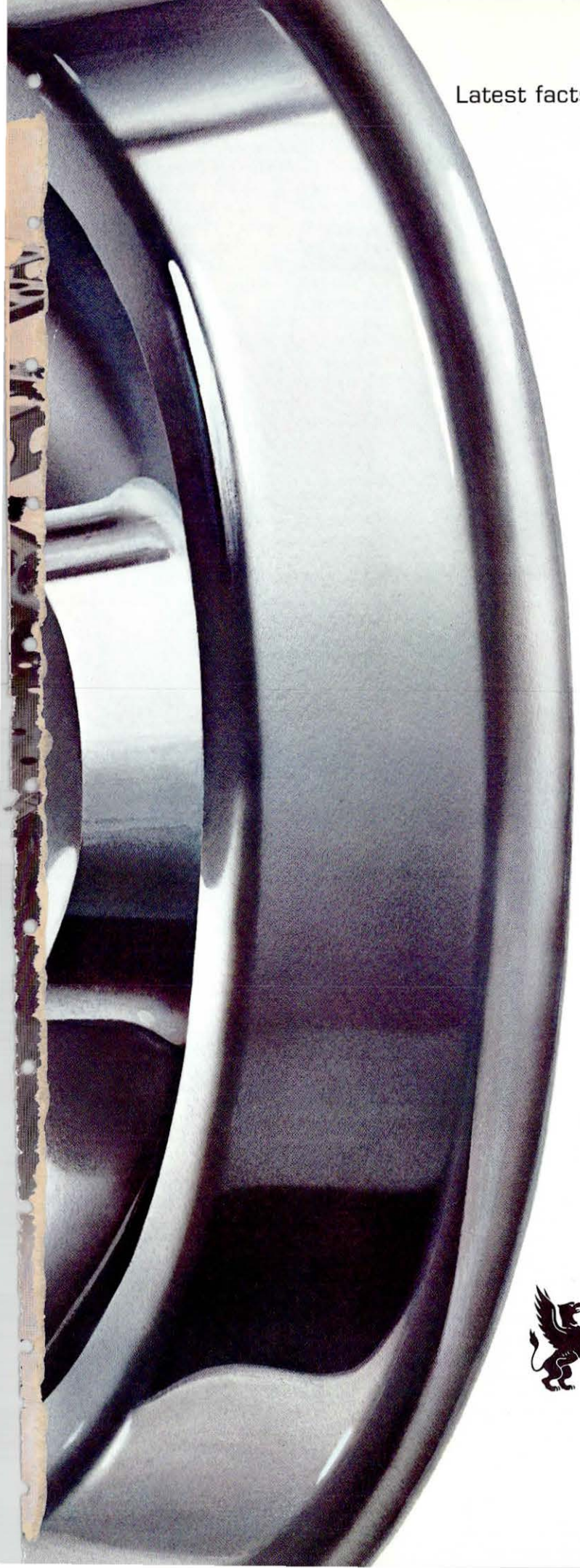
- **Why change?** For one thing, mobility has become a more common thing with the population as a whole; people move more frequently than they did in years past, and it shouldn't be surprising that railroad men, too, are moving. In addition, capable railroad officers seem to be getting to the top a bit more quickly these days. The "young" president isn't the rarity he used to be, and opportunity can knock more than once for the man who has proved himself and has a presidency in, say, his 40s.

The turnover on individual properties can be accounted for by no one thing, but by many—age; merger or control changes; the desire to get in-trouble property out of trouble; that tendency toward individual mobility.

As for the resurgence of operating men as prime candidates for top jobs, this could merely be a return to traditional practices—but there may also be far more reasonable reasons. Ten years or so ago, there seemed to be a feeling that only a lawyer knew something about everything involved in running a railroad. Legal training was presumed invaluable in steering a company properly in all its dealings with various levels of government. These things may still be true today—but right now technology is talking louder than the lawyer's technique, and the operating men are being tabbed for the presidencies.

- **The tech-change breakthrough.** In the past decade, and particularly in the past five years, technological advance has been moving at a fierce pace (and it shows few signs of any slowdown). Technological progress has opened up new possibilities for service and operational improvements — and capable operating men have built glittering reputations by the way they've handled the new technology.

Even with the new emphasis on an operating background, however, there's no real need to shed a tear for the men whose training was more with law books than with operating timetables. Not with men such as Heineman, Tuohy, Langdon, Saunders, Murray, Milwaukee Road President William J. Quinn, Chicago & Eastern Illinois President David O. Mathews, Northern Pacific President Robert S. Macfarlane, Association of Western Railways President Clair M. Roddewig and AAR President Daniel P. Loomis around to show what an ambitious fellow with a law degree can still do in the railroad business. ■



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Examiners propose car-rental changes

Would substitute time-mileage basis for per diem; rate adjustments in lieu of allowances on shipper-owned tank cars.

Major changes in car-rental arrangements which have been proposed by two ICC examiners are sure to draw emphatic, though differing, reactions from the railroads.

One proposal calls for substituting a time-mileage basis for the present time basis of per diem charges for use of freight cars by railroads other than the car owners. The other calls for abandonment, in favor of rate adjustments, of allowances now made by railroads for use of tank cars furnished by shippers.

The per diem recommendation came from Examiner R. C. Bamford in No. 31358 and two related cases. The tank car proposal came from Examiner J. S. Kaplan in I&S 8135 and three related cases. Both recommended reports were served Dec. 23, 1965, with exceptions due Jan. 24. In view of the substantative changes proposed, the first railroad responses will probably be petitions for more time to prepare exceptions or supporting statements.

● **Cases involved.** The title per diem case, No. 31358, involves a complaint which is more than 12 years old. It was filed in September 1953 by 19 large railroads against nine eastern roads which refused to pay per diem rates fixed by the AAR. Also involved is No. 33145, the investigation of per diem rates and rules instituted by the Commission in July 1959, and No. 34405, Southern's complaint filed in March 1964 to assail rates of the multi-level plan which supplanted the uniform-rate plan that had previously been in effect.

The title tank-car case, I&S No. 8135, is the Commission's investigation, instituted in August 1964, of Southern's plan of increased allowances, payable only on the loaded-car-mile basis. Other cases dealt with by Examiner Kaplan are No. 34480 and its Sub-Nos. 1 and 2, all of which were instituted in September 1964. In turn, these involve the differing loaded-mile and empty-mile allowances established that month by the Atlantic Coast Line and Seaboard Air Line and some of their connections; other allowance arrangements published subsequently, including the multi-level plan established by the AAR to supplant its uniform-allowance plan; and the Commission's investigation of allowances paid under the AAR Code of Per Diem Rules which are not published in tariff form. These are allowances paid on cars leased by shippers. Allowances for shipper-owned cars are published in tariffs.

● **Two per diem rates condemned.** As to present per diem rates, Examiner Bamford would have the Commission condemn charges set out in the first two value brackets of the AAR's nine-bracket, multi-level plan. He also calls for condemnation of the past rates in issue in the complaint case. The condemned present charges are $2.16 per day for cars valued at less than $1,000 and $2.79 for cars valued from $1,000 to $5,000. Examiner Bamford would find them unreasonable to the extent that they exceed $1.83 and $2.35, respectively.

Charges in the other seven brackets range from $3.58, for cars valued from $5,001 to $10,000, to $12.18 for cars valued at more than $35,000. These "cannot be found to be or to have been in excess of reasonable compensation for cars," the recommended report said.

● **Time-mileage approach.** Meanwhile the examiner did find many infirmities in the multi-level plan, as he led into recommendations calling for a time-mileage basis. The multi-level rates, he said, "do not provide a fair, just, reasonable and non-discriminatory method of compensation for use of freight cars."

His bill of particulars here criticized some of the cost accounting involved, and it expressed dissatisfaction with the value-bracket spreads of $5,000. Bamford also pointed out that the midnight-to-midnight day of the present time-basis system sometimes permits railroads to escape paying rent for foreign cars from which they have derived appreciable revenues.

● **How it would work.** A proper time-mileage scale, in Bamford's opinion, would be based on the original cost of cars and their years of service, and it would have cost-bracket spreads of only $2,000. A table in this recommended report illustrates what the examiner had in mind. In the table's lowest bracket are cars one-to-five-years old, costed at $1,000 or less, which would rent for a time charge of 96 cents per day plus 1.46 cents per mile. In the highest bracket are cars one-to-five-years old, costed from $39,000 to $41,000, which would rent for $10.86 per day plus 5.06 cents per mile.

● **Past per diem.** Past per diem rates involved in the complaint case were the subject of a 1955 Commission report which found them reasonable. That decision was appealed and the courts sent it back for more consideration of various factors, including time-mileage proposals.

Meanwhile, the railroads refusing to pay the rates have become defendants in collection cases brought in court by owners of the cars involved.

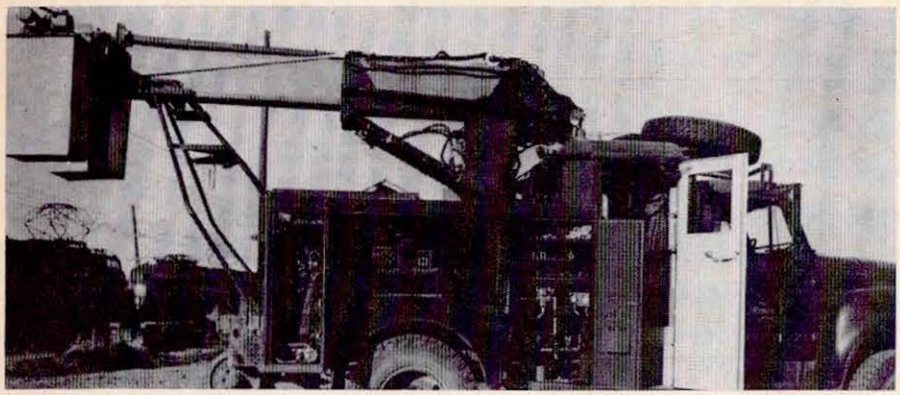
The past rates in issue are the uniform per-diem charges in effect prior to adoption of the multi-level plan. They were $2.40 from August 1953 through December 1956, $2.75 from January 1957 through November 1959, and $2.88 from December 1959 through December 1963. Examiner Bamford would have the Commission make a general finding that these charges were unreasonable to the extent that they exceeded $2.08, $2.25 and $2.74, respectively.

The examiner also followed through to propose, as reasonable for the same periods, specific charges for the six roads which have not arranged for settlement of these past accounts. These specific charges are a composite of time and mileage factors. They vary over-all from Long Island rates of $1.55, $1.67 and $2.04, to Rutland rates of $2.32, $2.51 and $3.06.

● **Tank-car case.** Examiner Kaplan's recommended findings in the tank-car case call for publication in tariffs of all allowances, i.e., those for cars leased by shippers as well as for shipper-owned cars. He also recommended that the allowance in the AAR scale for loaded and empty movements of tank cars valued under $2,001 be restored to 5.5 cents per mile. It was 4.8 cents last year and became 4.1 cents Jan. 1.

For the longer pull — within six months from the effective date of the foregoing — Kaplan would have the Commission require the railroads to recast the multi-level allowance plan in line with detailed specifications of the recommended report, or publish reduced rates on bulk liquid commodities to reflect "the actual transportation provided . . . which does not include furnishing of tank cars." ■

NEW **PRODUCTS** REPORT



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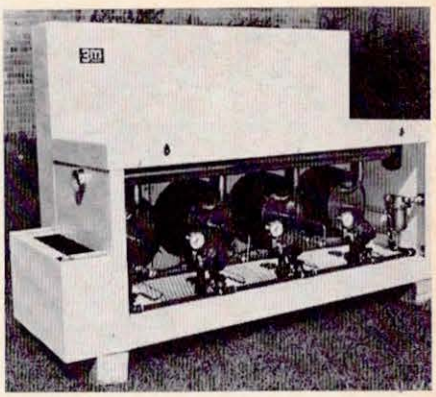

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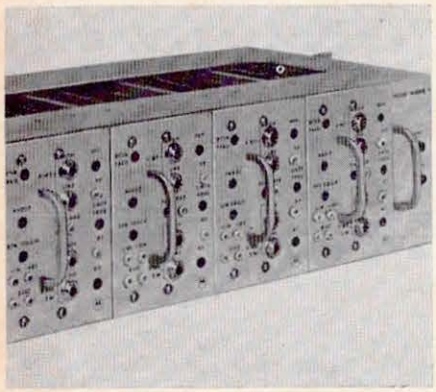

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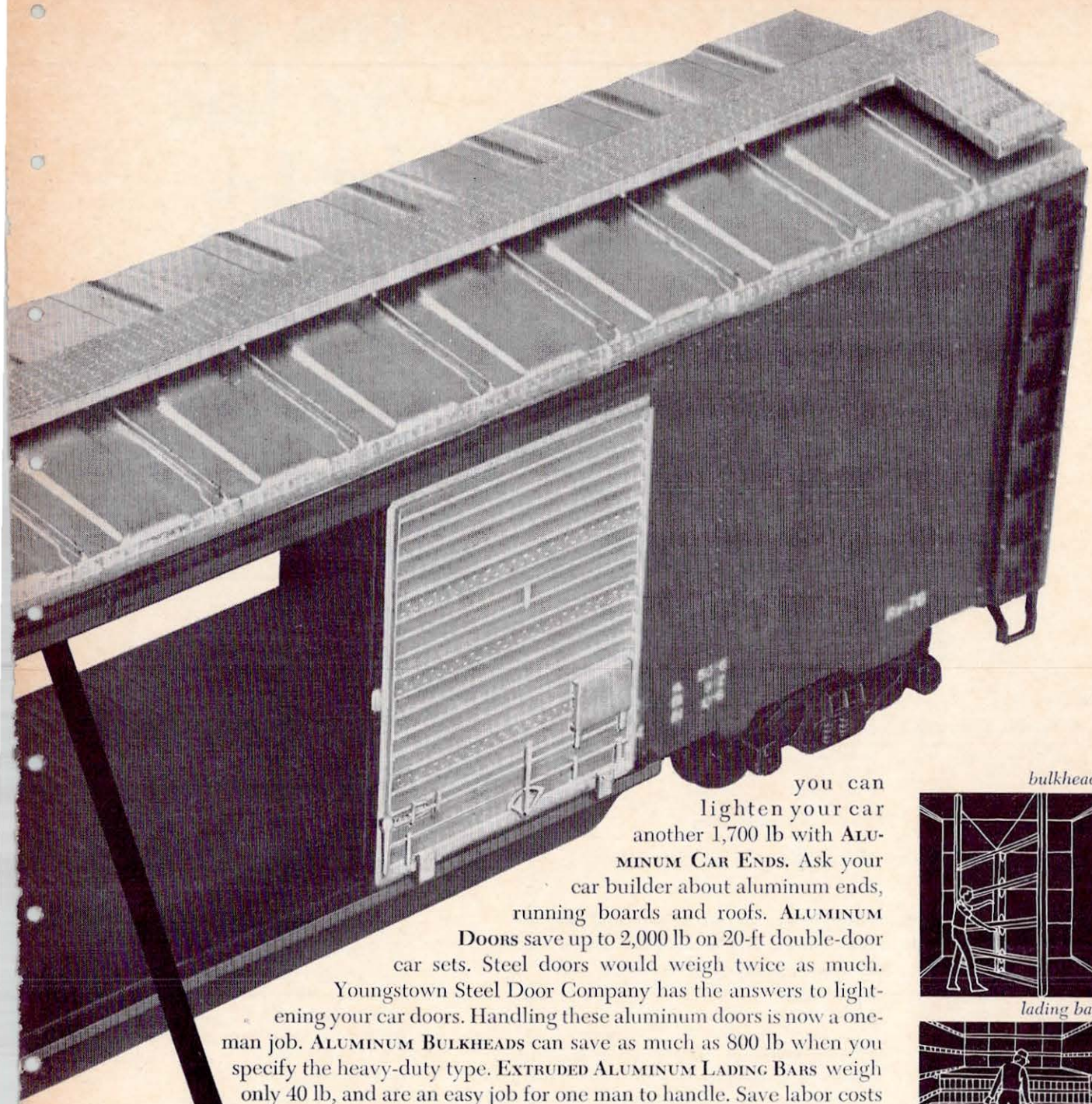

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End of the line for E-L riders?

About 35,000 New Jersey commuters ride Erie Lackawanna suburban trains to and from work each day. But the money they drop in the till doesn't come close to paying for the service. Last week, asserting that the continued existence of the railroad as a freight carrier is threatened, E-L went to the New Jersey Board of Public Utilities Commissioners and asked permission to discontinue all intrastate suburban passenger service.

● **$9-million deficit.** Losses on commuter trains, E-L President William White told the commission, are running at the rate of more than $9 million a year, He added:

"We have some 22,000 shareowners and additional thousands of holders of debt securities who have been subsidizing this service for many years. They simply cannot continue to bear this heavy burden indefinitely. There is too much at stake—not only for the future of the railroad but for the economy of the state which depends upon efficient freight service."

● **State aid not enough.** Since 1960, New Jersey has been making stop-gap payments to its commuter railroads in an effort to maintain service until a permanent solution can be found. But the payments have been substantially less than the losses. E-L's last contract with the state expired Dec. 31. The railroad had earlier notified state authorities that since no progress was being made toward a long-term solution, it would forego further payments and press for abandonment.

Said White: "We fully realize the impact that discontinuance will have. We do not regard our action lightly. It is a matter of serious import to many people; but if this service is considered essential by the public, it should be paid for by the public and not by the security holders of the railroad."

"This service cannot continue," he declared, "unless funds are forthcoming through a state agency or some other means not only to rehabilitate and modernize the service, but to pay for the cost of the operation as well. The railroad is no longer in a position to do it." ■

MARKET OUTLOOK

Carloadings

Loadings of revenue freight in the week ended Jan. 1 totaled 458,444 cars, the Association of American Railroads announced on Jan. 6. This was a decrease of 12,462 cars, or 2.6%, compared with the previous week; an increase of 32,846 cars, or 7.7%, compared with the corresponding week last year; and an increase of 18,297 cars, or 4.2%, compared with the equivalent 1964 week. Ton-miles generated by carloadings in the week ended Jan. 1 are estimated at 11.4 billion, an increase of 12.7% above the corresponding week of 1965, and an increase of 13.4% above the 1964 week.

REVENUE FREIGHT CARLOADINGS

District	For the year 1965	1964	1963
Eastern, including Allegheny and Pocahontas	11,923,051	11,551,940	11,535,150
Southern	5,908,717	5,697,568	5,644,033
Total Eastern and Southern Districts	17,831,768	17,249,508	17,179,183
Northwestern	3,909,445	3,936,995	3,840,372
Central Western	5,853,608	5,904,701	5,875,674
Southwestern	1,958,950	1,935,982	1,975,828
Total Western Districts	11,722,003	11,777,678	11,691,874
Total All Roads	29,553,771	29,027,186	29,871,057
Commodities:			
Grain and Grain products	2,657,334	2,625,259	2,804,161
Livestock	125,217	153,171	164,341
Coal	5,679,188	5,529,744	5,532,976
Coke	440,212	422,743	386,262
Forest Products	2,003,409	1,959,550	1,872,305
Ore	1,961,668	2,004,968	1,764,935
Merchandise l.c.l.	465,022	639,158	868,192
Miscellaneous	16,221,721	15,692,593	15,477,885
Cumulative total, year 1965	29,553,771	29,027,186	29,871,057
Estimated revenue ton-miles (billions) year 1965	695.0	658.0	622.0

PIGGYBACK CARLOADINGS.—U.S. piggyback loadings for the week ended Dec. 25 totaled 16,456 cars, compared with 12,054 for the corresponding 1964 week. Loadings for 1965 totaled 1,031,210 cars, compared with 890,216 for 1964.

IN CANADA—Carloadings for the seven-day period ended Dec. 14 totaled 76,985 cars, compared with 79,452 for the previous seven-day period, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada		
Dec. 14, 1965.....	76,985	23,587
Dec. 14, 1964.....	75,370	23,188
Cumulative Totals		
Dec. 14, 1965.....	3,810,585	1,196,250
Dec. 14, 1964.....	3,770,615	1,149,652

FREIGHT-TRAIN CARS

► *Canadian National.*—Ordered 400 70-ton steel flat cars at a cost of $5 million. Marine Industries Ltd., will build 200 of the cars, which will be equipped with wrap-around bulkheads for lumber traffic. International Equipment Co. Ltd., will build 200 flat cars for general service, with delivery scheduled for March.

► *Frisco.*—Ordered 662 new freight cars at a cost of approximately $10,640,000. On the list: 150 100-ton, 3,000-cu-ft-capacity covered hopper cars from Pullman-Standard; 100 100-ton gondolas from Darby Manufacturing; 200 70-ton box cars equipped with cushion underframe from ACF; 100 70-ton insulated box cars equipped with cushion underframe, movable bulkheads and sidewall fillers, and six 100-ton box cars equipped with cushion underframe and DF complement from Evans Products; 50 100-ton, 70-ft bulkhead flat cars from Ortner; and six 70-ton, 2,600-cu-ft-capacity Airslide covered hopper cars from General American. In addition, Springfield, Mo., company shops will build 50 70-ton bulkhead flat cars.

► *Seaboard Air Line.*—Ordered 800 new freight cars at a cost of $13,120,000. ACF will build 500 cushion underframe, 70-ton box cars, equipped with roller bearings, at a cost of $8,200,000. Pullman-Standard will build 300 similar box cars at a cost of $4,920,000. The cars will be delivered in the last quarter of this year.

ORDERS AND DELIVERIES

► *Orders Increase.*—Orders for new freight cars in November totaled 7,853, compared with 6,474 ordered in October. Orders in November 1964 totaled 6,443. Deliveries of new freight cars totaled 6,980 in November, compared with 7,084 in October. In November 1964, 5,807 cars were delivered. Backlog of cars on order and undelivered as of Dec. 1, 1965 showed 10,265 on order in railroad shops and 32,220 in the shops of contract car builders, for a total of 42,485 cars. This compared with 41,612 on order Nov. 1, 1965, and 29,812 on order Dec. 1, 1964. As of Dec. 1, 7,520 cars were scheduled for rebuilding, compared with 5,801 on Dec. 1, 1964. Deliveries of rebuilt cars totaled 1,081 in November.

LOCOMOTIVES

► *Frisco.*—Ordered 16 2,500-hp diesel-electric units from EMD at a cost of $2,760,000. Deliveries are scheduled for February and March.

► *Rock Island.*—Will order 25 diesel-electric units of various horsepower ratings, including both road and switch units.

► *Seaboard Air Line.*—Ordered 30 3,000-hp diesel-electric locomotives from EMD at a cost of $6,225,000. Delivery will begin in the Spring and be completed in July.

NEW FACILITIES

► *Gulf, Mobile & Ohio.*—Ordered Type J CTC equipment from General Railway Signal to expand its Wann to Bloomington, Ill., installation northward to Pontiac,

YOU OUGHT TO KNOW

NP's optimistic, but . . .: Northern Pacific, forecasting a good year in 1966, is spending a record-high $42 million for new equipment and property improvements—but the road still expresses deep concern about the state of the car fleet nationally. Says President Robert S. Macfarlane: "If the railroad industry is to realize its full potential as the prime mover of freight in this competitive transportation market, it is imperative that the national freight-car supply be increased through a vigorous and accelerated car-building program, supported equally by all of the nation's railroads. This is a major problem facing our industry."

Apex expands: Transco's decision to put a carbuilding plant at San Bernardino, Calif., has led to a second railway-supplier expansion in the area. Apex Steel is installing a new facility at Fontana, Calif., principally to build underframes and car sides. And the Apex expansion was prompted largely by an initial Transco order of about $500,000. Apex says the new division will be a "prime supplier" to Transco. Projected annual sales of the division, the company believes, will be in excess of $3 million.

New marketing man for Pennsy: George R. Wallace, who left the Pennsylvania three years ago to become vice president, traffic, of the Lehigh Valley, returned to the PRR Jan. 1 as general manager, market research. The appointment of Wallace to head the railroad's new market research organization (RA, Nov. 8, 1965, p. 7)—and the earlier selection of Charles C. Kelsey as manager, market research—means that "we are concentrating our marketing and traffic development program in the hands of specialists," said Henry W. Large, vice president, traffic. During his earlier hitch with the Pennsy, Wallace was manager, freight sales and services, of the Buckeye Region, Cincinnati.

More for piggyback: As 1965 drew to a close, the Milwaukee Road was getting ready for another boom year in piggyback—with delivery of 200 new aluminum refrigerated trailers and 50 dry vans. Four manufacturers participated in the order, placed for Milwaukee Motor Transportation Co. at a cost of about $3.5 million. The Milwaukee had good reason for beefing up its equipment supply: TOFC volume in 1965 was 26% above 1964 levels.

Head for the campus: The demand for college-trained engineers, notes Burlington, is big today and will be bigger tomorrow. And so the railroad is launching the first college recruiting campaign in its 117-year history, with the immediate goal of hiring 20 graduates this spring. As part of the drive, CB&Q has produced a handsomely illustrated 16-page promotional brochure, "Growth Industry Careers," which includes this sum-up by President Louis W. Menk: "Railroading today puts more of a demand on the intelligence, the initiative, the perspective and the social quality of its people than it ever has in the past." And the railroad's parting shot, on the back cover of the booklet: "Put your future where the action is—Burlington Route."

Success story: In the spring of '65, Chesapeake & Ohio-Baltimore & Ohio offered something new to coil-steel shippers—200 Evans-designed cars featuring hydraulic cushioning and lift-off covers (RA, April 12, 1965, p. 16). The new cars, say C&O-B&O, won "widespread acceptance"—so widespread that another 100, in an improved version, have now been ordered. The new models feature longer lading troughs in which the steel coils rest. The number of expanding bars used to separate coils has been reduced to facilitate handling. Fifty of the new cars will be assigned to C&O and 50 to B&O.

Truck tonnage: Intercity truck tonnage in the week ended Dec. 25 was 21.9% below that of the previous week, and 23.5% ahead of volume in the corresponding week of 1964, according to American Trucking Associations.

Current statistics

Net Income	
9 mos., 1965	$540,000,000
9 mos., 1964	500,000,000
Carloadings, revenue freight	
52 wks., 1965	29,553,771
52 wks., 1964	29,027,186
Freight cars on order	
Dec. 1, 1965	42,485
Dec. 1, 1964	29,812
Freight cars delivered	
11 mos., 1965	72,919
11 mos., 1964	62,471
Serviceable cars	
Dec. 1, 1965	1,404,835
Dec. 1, 1964	1,403,939

PEOPLE IN THE NEWS

ALTON & SOUTHERN.—**R. K. Heineman,** president, East St. Louis, Ill., retired Jan. 1, for health reasons. **L. L. Schaltenbrand,** treasurer and controller, elected chief executive officer and executive vice president and will assume Mr. Heineman's administrative responsibilities.

ASSOCIATION OF AMERICAN RAILROADS.—**Ralph S. Harlan,** assistant—Advisory Boards, Car Service Division, Washington, D.C., retired Dec. 31, after serving the railroad industry for 52 years. **Harry Peterson,** secretary, Midwest advisory board, Chicago, succeeds Mr. Harlan.

CANADIAN NATIONAL.—**Jean H. Richer,** manager, Champlain Area, Montreal, appointed vice president—passenger sales and services of the system at Montreal, succeeding **Pierre Delagrave,** resigned (RA, Dec. 20/27, p. 74).

R. M. Gardner, assistant manager—industrial development, St. Lawrence Region, Montreal, retired Jan. 1, after 43 years of service and that position abolished.

ERIE LACKAWANNA.—**George C. Frank,** assistant to president, Cleveland, elected secretary-treasurer and will continue in charge of public relations. Mr. Frank succeeds **Robert H. Hann,** who, at his own request, returns to the law department as assistant general counsel, Cleveland.

William C. Hartman appointed assistant to vice president—purchases and stores, Cleveland, succeeding **John J. Kilroy,** named assistant purchasing agent there.

Robert A. Packer, trainmaster, Kent, Ohio, promoted to assistant superintendent, Marion Division, Chicago. **Michael E. Kalapos,** assistant trainmaster, Cleveland, promoted to trainmaster, Marion Division, Kent, Ohio.

Herbert J. Barnes appointed assistant superintendent of construction, Cleveland.

Bernard H. Dexter, assistant division engineer, Susquehanna division, Hornell, N.Y., promoted to division engineer, Buffalo division, Buffalo, N.Y., succeeding **Alfred F. Gryceski,** transferred to the New York Division, Hoboken, N.J. Mr. Gryceski succeeds **Walton E. Smith,** resigned.

FRISCO.—**James H. Brown,** division manager, Memphis, Tenn., appointed general manager, Springfield, Mo., to succeed **H. L. Gastler,** resigned to become president of the **Toledo, Peoria & Western.** Mr. Brown's successor is **J. Christian,** division superintendent, Memphis, who in turn is replaced by **L. J. King, Jr.,** terminal superintendent, Memphis. **B. C. Davidson,** superintendent, Fort Worth, Tex., succeeds Mr. King.

John D. Stuart, traffic representative, Joplin, Mo., appointed district sales manager there.

ILLINOIS CENTRAL.—**Robert Mitten,** general counsel in charge of the Law Department, elected vice president and general counsel.

Allen L. Sams, chief engineer, elected vice president and chief engineer.

JERSEY CENTRAL.—**James H. MacAnanny,** assistant to vice president—planning, Chesapeake & Ohio—Baltimore & Ohio, appointed manager of transportation, CNJ, Jersey City, N.J.

LEHIGH VALLEY.—**Charles H. Wolfinger,** assistant vice president, **Pennsylvania,** Baltimore, Md., appointed vice president—traffic, LV, Bethlehem, Pa., succeeding **George R. Wallace,** who has returned to the PRR as general manager of the newly established market research department.

LOUISVILLE & NASHVILLE.—**Robert E. Harridge** named manager of marketing-agricultural commodities. He was formerly assistant general traffic manager, **Allied Mills, Inc.**

Carroll W. Ashby, Jr., trainmaster, Etowah, Tenn., named assistant superintendent, Cincinnati division, Latonia, Ky., to replace **C. B. Matthews,** transferred to Pensacola, Fla.

J. P. Walker, engineer of tests, South Louisville, Ky., appointed planning-production engineer there. **Windsor Stone,** assistant engineer of tests, succeeds Mr. Walker.

PENNSYLVANIA.—**Richard E. Franklin,** senior vice president, **Southern,** returned to the Pennsylvania on Jan. 1 as vice president—transportation and maintenance. **J. Benton Jones,** vice president—purchases and real estate, appointed vice president—engineering and real estate. **Chester J. Henry,** chief engineer, retired Jan. 1. **John F. Piper,** assistant chief engineer—construction, appointed assistant chief engineer—maintenance, succeeding **Donald E. Rudisill,** retired. **John W. Wallenius,** area engineer, Philadelphia, named assistant chief engineer—construction, replacing Mr. Piper. **William J. Sponseller,** resident engineer, Baltimore, succeeds Mr. Wallenius.

William P. Eckfeldt, manager of TrucTrain (piggyback) sales, Philadelphia, appointed assistant vice president and sales manager, Baltimore, succeeding **Charles H. Wolfinger,** named vice president—traffic, **Lehigh Valley,** New York. Mr. Wolfinger succeeds **George R. Wallace,** who has been appointed general manager—market research, PRR. **Frank C. Matey,** district sales manager, Columbus, Ohio, appointed manager of TrucTrain (piggyback) sales, succeeding Mr. Eckfeldt.

Richard R. Bongartz, general attorney, named general solicitor, Philadelphia.

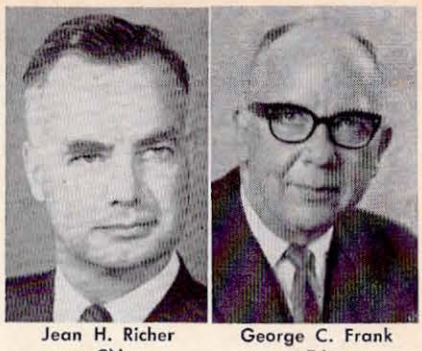
ROCK ISLAND.—Has reduced the number of its operating divisions from six to five. They are the Illinois division, Chicago, **Frank Garner,** superintendent; the Central division, Des Moines, Iowa, **David E. Visney,** superintendent; the Des Moines division, Des Moines, **George H. Voss,** superintendent; the Missouri-Kansas division, Kansas City, Kans., **Joseph F. Orlomoski,** superintendent; the Southern division; El Reno, Okla., **Oliver R. Thurston,** superintendent. The former Rock Island division is a part of the Central and Illinois divisions; the Arkansas division was merged with the Southern division, and the Chicago division was absorbed into the Illinois division.

ROCK ISLAND MOTOR TRANSIT.—**Paul F. Kluding** named general manager, Des Moines, Iowa, to succeed **L. L. Cole,** appointed controller.

TOLEDO, PEORIA & WESTERN.—**J. Russell Coulter** elected to the newly created position of chairman and chief executive officer. Mr. Coulter's successor as president is **Harold L. Gastler,** formerly general manager, **Frisco.**

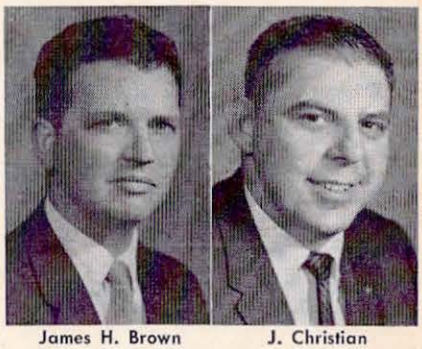
UNION PACIFIC.—**Francis G. Mackie,** assistant treasurer, New York, elected treasurer there, succeeding **Donald A. Powell,** retired. **Kenneth H. Vanderziel,** assistant controller, succeeds Mr. Mackie as assistant treasurer. **Eugene A. McAteer,** income tax auditor, named assistant controller, succeeding Mr. Vanderziel. **Lewis A. Klingler,** assistant transfer agent, appointed transfer agent, succeeding **Joseph L. Ward,** retired.

Marvin Christensen appointed assistant to



Jean H. Richer
CN

George C. Frank
E-L

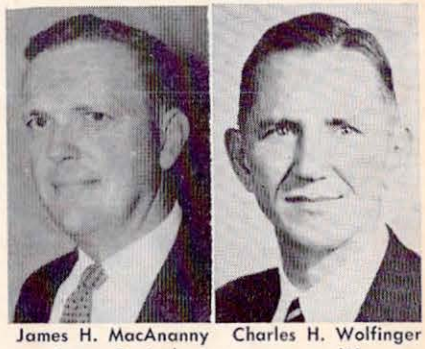


James H. Brown
Frisco

J. Christian
Frisco

Robert Mitten
IC

Allen L. Sams
IC



James H. MacAnanny
Jersey Central

Charles H. Wolfinger
LV

Robert E. Harridge
L&N

Wm. P. Eckfeldt
PRR

George R. Wallace
PRR

Richard R. Bongartz
PRR

Paul F. Kluding
RI Motor Transit

Harold L. Gastler
TP&W

Francis G. Mackie
UP

James J. Conway
Evans

vice president—traffic, Omaha, Neb.

Don V. Martin and **Horace D. Todd** named general traffic agents at Omaha and Salina, Kan., respectively.

Supply Trade

James J. Conway, vice president and general manager, **Transportation Equipment Division, Evans Products Co.,** has been named executive vice president in charge of the **Transportation Equipment Group,** which includes **United States Railway Equipment Co.** and **Chicago Railway Equipment Co.**

Daniel T. Warner, Jr. has been named manager of transportation services, **American Steel Foundries.** He was formerly central region traffic manager, **Universal Atlas Cement.**

Emmett W. Cox has been named chief engineer and assistant general manager, **Matisa Equipment Corp.** and **Matisa Railweld,** with headquarters at Chicago Heights, Ill.

Robert A. Greenbury has been elected a vice president, **North American Car (Canada) Ltd.** He will also continue to serve as general manager.

William V. Davey, sales representative, **Thrall Car Manufacturing Co.,** has been promoted to assistant vice president-sales. He will also continue to serve as general manager, **Western Railway Equipment Co.**

William M. Roche, general sales manager, **Freight Car Division, General American Transportation Corp.,** has been elected a corporate vice president. **Charles L. Cogswell,** manager of the Government Department, has been appointed assistant director of marketing.

Buffalo Brake Beam Co. and **Unit Truck Corp.** have moved their sales offices to 400 Ingham Avenue, Lackawanna, N.Y., from 140 Cedar Street, New York.

Apex Steel Corp. has expanded its manufacturing facilities on a new 14 acre site in Fontana, Calif., for the manufacture of railroad car components. The new Apex division will be a prime supplier to **Transco,** which recently announced construction of a million dollar railroad freight car assembly plant in San Bernardino.

George A. McLean has been appointed assistant vice president—sales, **Brandon Equipment Co., Inc. Eugene Korzenko** appointed sales manager.

Edwin L. Marmon, sales engineer, **General Steel Industries Inc.,** has been appointed district manager—sales, with headquarters remaining at Granite City, Ill.

Donald Gatens has been named a sales representative for mine and industrial cars manufactured by the **American Car & Foundry division of ACF Industries, Inc.**

Hayes

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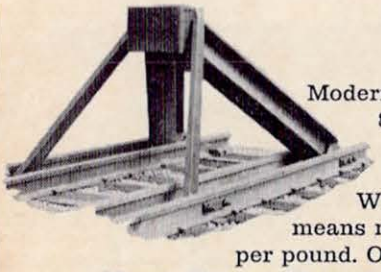

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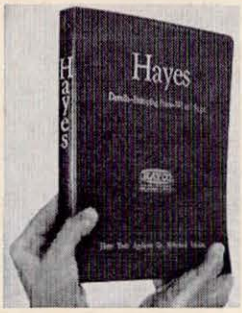

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JAN. 17

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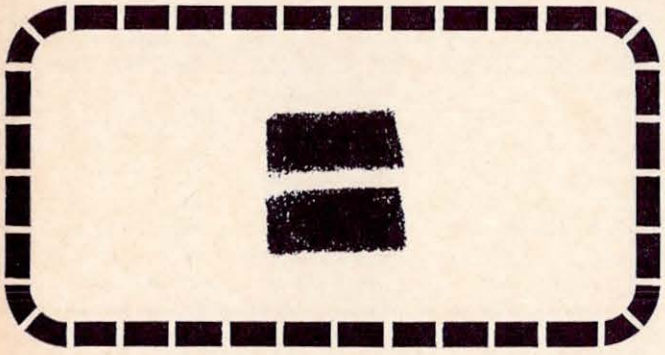

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C. H. Yiu, Managing Director

THE ACTION PAGE

The railroad world gets smaller

"Are you jetting to Japan this summer?"

"No, I think I'll take in Europe this year. It's been several years since I was there and I want to find out what's new and exciting."

This fragment of conversation could very well take place between a couple of pleasure-seekers in the habit of spending their vacations abroad. It could just as easily have taken place between two top railway officers who have learned the value of keeping up with railway developments in other parts of the world.

It was not always thus. Take engineering, for example. In the years prior to and immediately after World War II the attitude of the American railway engineer toward track or other railway engineering practices in Europe and other parts of the world was one of vast unconcern. The source of this disinterest was a comfortable notion that practices here were far and away the most advanced in the world. Therefore, why be concerned about what kind of crossties the Germans were using or how the French were tamping their track?

Meanwhile, railway engineers from other countries were showing an avid interest in American practices. Every year, it seemed, the United States was invaded by one or more delegations of railway engineers from abroad, whose assignment was to study American practices with the objective of determining if any of them could be used with profit back home. More often than otherwise these visitations were timed to coincide with the exhibitions of track machinery and other products of the railway supply industry that are held in this country periodically.

Basic conditions differ, but—

A logical question is whether these delegations found much in the way of machinery or other practices that would be of practical use under the conditions that prevailed in other countries. This question is apropos because of the differences that existed in basic conditions. For example, in Europe, and everywhere else for that matter, labor was plentiful and cheap. The incentive to mechanize, therefore, was not as strong as it was in this country. Also, as it was frequently pointed out, axle loads were much lighter than here, which led to differences in the track structure.

But after the war conditions in Europe began to change. Rapid industrial growth in some of the countries had the effect of soaking up excess labor. The resulting higher wage rates set in motion a wave of mechanization in track maintenance, and other developments occurred involving the track structure. As word of these developments filtered back across the Atlantic, American railway engineers began to exhibit increasing interest in what their counterparts in Europe were doing. There even began to be scattered instances of American engineers journeying across the waters to see for themselves what was going on. What started as a thin trickle has now grown to a fairly steady annual flow which at least matches, and quite probably exceeds, the visitations of Europeans to this country.

American engineers who have studied European practices at first hand have come to several basic conclusions. One is that the composite European engineer is not only extremely capable and dedicated but is also an imaginative innovator in dealing with the problems facing him. Another is that European equipment designers have shown themselves fully capable of the skill and ingenuity needed in developing track machinery to cope with conditions on the Continent and elsewhere.

European engineers: Ingenious, bold

Travelers to Europe have observed other qualities in the engineers there. One is a willingness, even eagerness, to embrace and apply the fruits of technological progress. Another is a spirit of bold aggressiveness in adopting practices they are convinced will produce savings or other benefits. For example, an engineering officer who spent several weeks in Europe last fall, noted that all the track he saw, whether in main lines, branch lines or in yards, was laid with butt-welded rail, and that much of it had been welded in the field. Having in mind the fact that some railroads in the United States are still using welded rail only to a limited extent, he concluded that European railroads have, on the whole, moved ahead of American railroads generally in taking advantage of the benefits of continuous rail.

Other engineers, on returning from visits to Europe, have expressed themselves as being impressed by other practices and developments they have seen there. Such reports do not constitute an admission that railroad technology across the Atlantic has forged ahead of that in this country. Far from it. What these travelers are doing is acknowledging the possibility that European engineers may have come up with practices or equipment that conceivably could find application in this country.

Reports of engineers who have made inspection trips abroad are convincing evidence that such excursions can be highly productive to the individuals and their railroads. The trouble is that their observations and findings, except for an occasional talk before a maintenance of way club or association, are never made available to other railroad engineers generally. How can this situation be corrected?

One answer would be for the American Railway Engineering Association to establish machinery whereby it would act as a clearing house to receive, digest and summarize reports prepared by those who have made inspections abroad—and then to make the results available to its members.

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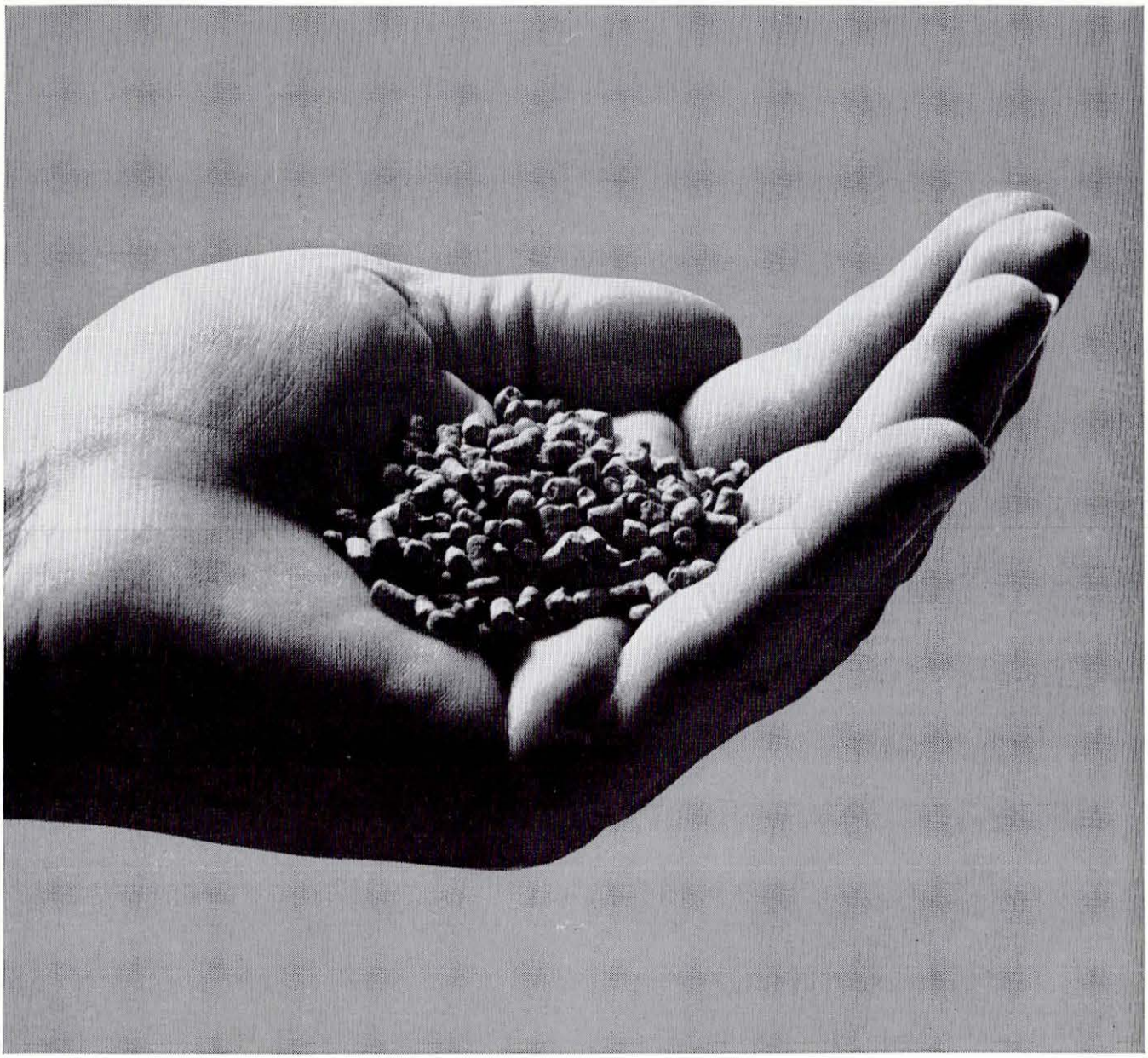

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